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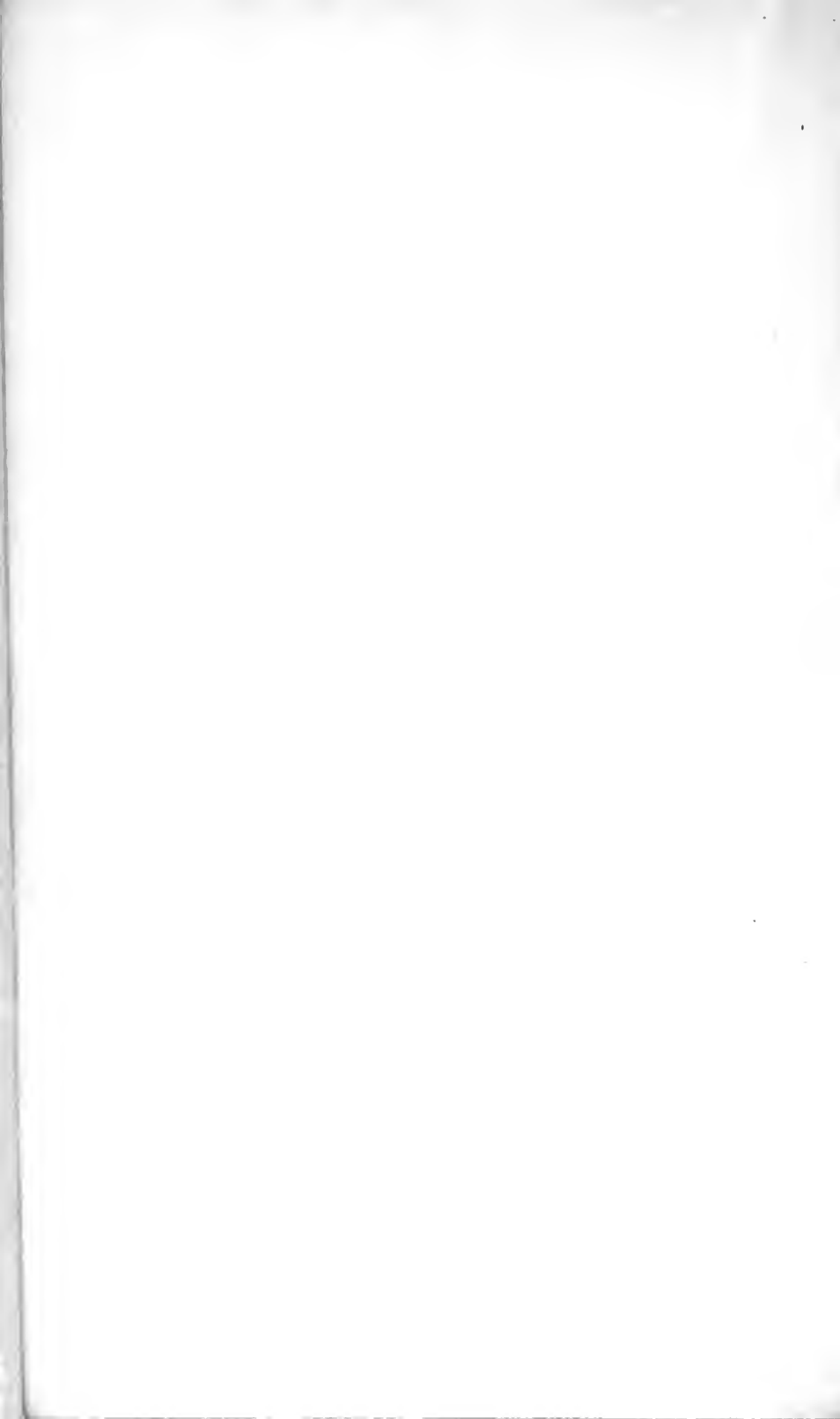
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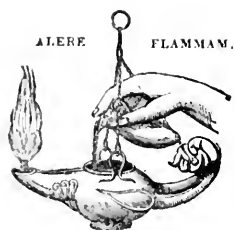






ILLUSTRATIONS  
OF  
TYPICAL SPECIMENS  
OF  
COLEOPTERA  
IN THE  
COLLECTION  
OF THE  
BRITISH MUSEUM,  
PART I.—LYCIDÆ.  
BY  
CHARLES OWEN WATERHOUSE.

LONDON:  
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1879.



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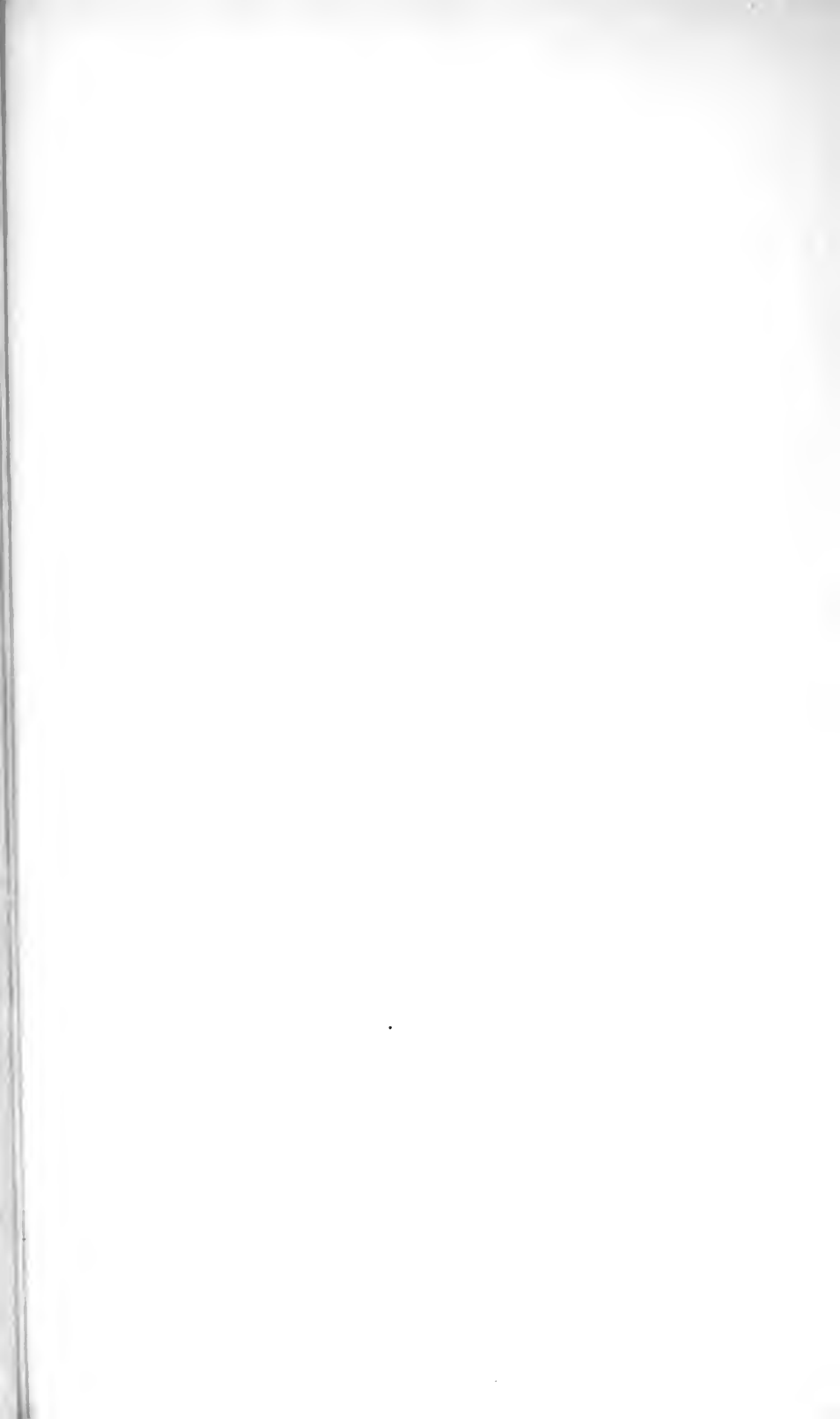
## PREFACE.

THIS series (of which the present is the first part) has the same object and scope as the series of 'Illustrations of Typical Specimens of Lepidoptera Heterocera,' viz. to give illustrations, accompanied by diagnoses or short descriptions, of those specimens of *Coleoptera* in the British Museum from which species have been described in other works, or are described now for the first time. The several parts will be devoted as much as possible to species belonging to the same Family or the same Fauna.

The descriptions of this first part have been prepared by Mr. C. O. Waterhouse, one of the Senior Assistants in the Department of Zoology.

ALBERT GÜNTHER,  
*Keeper of the Department of Zoology.*

British Museum,  
November 22, 1879.



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ILLUSTRATIONS  
OF  
TYPICAL SPECIMENS  
OF  
COLEOPTERA.

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LYCIDÆ.

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MACROLYCUS.

*Waterh., Trans. Ent. Soc., 1878, p. 96.*

Antennæ compressed, dentate. Rostrum none; apical joint of the maxillary palpi large, triangular. Claws with a sharp tooth at the apex, scarcely visible in the male, very distinct in the female.

This genus is at once separated from all the genera of this family by the toothed claws.

**Macrolycus bowringii.**

(Plate I. fig. 1.)

*Waterh., Trans. Ent. Soc., 1878, p. 95.*

Niger, opacus; thorace coccineo, lateribus reflexis, angulis posticis acutis; scutello nigro; elytris basi thorace haud latioribus, postice gradatim ampliatis, coccineis, quadricostatis, costis parum elevatis, interstitiis subtiliter punctulatis. Long. 10 lin.

*Hab. Allahabad (J. C. Bowring, Esq.).*

Antennæ three quarters the length of the elytra, compressed, rather broad, strongly dentate. Thorax a little broader than long, in the middle in front rather angular, constricted a little behind the middle, the posterior angles diverging; the anterior and lateral margins broadly reflexed, with a short carina in front. and a carina

on each side at the constriction; disk with a longitudinal mesial impression. Scutellum narrowed towards the apex. Elytra long, much enlarged posteriorly; each elytron with four costæ, the interstices finely and thickly punctured, and with indications of reticulation here and there.

### CALOCHROMUS.

*Guérin, Ann. Soc. Ent. Fr.*, 1833, p. 158.

Section I. *Maxillary palpi very short, thick, compact, the apical joint nearly globular.*

#### *Calochromus basalis.*

(Plate I. fig. 2.)

*Waterh., Cistula Ent.*, ii. 1877, p. 196.

Niger, nitidus; elytris dimidio basali ferrugineo, quadricostatis, apicem versus paulo angustatis. ♀. Long. 5 lin.

*Hab.* Swan River.

Closely allied to *C. scutellaris*, Er., but relatively broader; thorax broader, with a deep mesial impression, broader in the middle; there is a deep round fovea at the anterior angle, and a deep impression within the posterior angle, the part between the anterior fovea and the posterior impression raised, so that the impressions are not confluent as in *scutellaris*. The antennæ are broader than in *scutellaris*, in which the fourth joint is twice as long as broad, whereas in *basalis* it is not more than one third longer than broad.

Section II. *Maxillary palpi less compactly jointed, the apical joint not globular.*

#### *Calochromus melanurus.*

(Plate I. fig. 5.)

*Waterh., Cistula Ent.*, ii. 1877, p. 196.

Cyaneo-niger, nitidulus, brevissime pubescens; thorace medio canaliculato, ad angulos anticos impresso, intra angulos posticos foveâ rotundatâ impresso, basi marginato; elytris ferrugineo-flavis, dense pubescentibus, prope suturam striatis, interstitiis convexiusculis, apice nigro. Long.  $4\frac{1}{2}$ – $7\frac{1}{4}$  lin.

*Hab.* Penang, Java, Sumatra.

Forehead between the eyes very prominent. Antennæ as long as the elytra, the two basal joints shining, the rest finely punctulate. Thorax very delicately and closely punctured, scarcely pubescent; disk with a fine mesial line, more deeply impressed behind, there is also a deep impression at each anterior angle; the posterior angles are rather inflated, and within them there is a deep impression. The elytra are rusty yellow, dull, and pubescent, bluish black at the apex.

**Calochromus orbatus.**

(Plate I. fig. 3.)

*Waterh., Cistula Ent.*, ii. 1877, p. 197.

Statura omnino præcedentis, differt tamen antennarum articulo tertio longiori; elytris totis ferrugineis. Long. 5-6½ lin.

*Hab.* Philippine Is. and Darjeeling.

This species only differs from *C. melanurus* in having the elytra uniform rusty yellow, and in having the third joint of the antennæ nearly three times as long as its greatest width, whereas in *C. melanurus* it is at most twice as long as broad.

**Calochromus apicalis.**

(Plate I. fig. 10.)

*Omalysus apicalis, Hope, Gray's Zool. Miscel.*, 1831, p. 24.

Niger; elytris rufis, plagâ magnâ basali nigra; thorace transverso, medio canaliculato, utrinque biimpresso, angulis rotundatis; elytris thorace paulo latioribus, postice parum ampliatis, apice rotundatis, pubescentibus. ♂. Long. 6 lin., lat. 2½ lin.

*Hab.* Nepal.

A rather broad species. Antennæ rather stout, half the length of the body; fourth joint as long as the two previous joints taken together, the fifth a little shorter: the sixth to ninth very slightly increasing in length, very little compressed, truncate at their apex. Thorax a quarter broader than long, moderately shining, the anterior angles are more rounded than the posterior; the central impressed line reaches from the posterior to the anterior margins, is well defined and of equal depth throughout; on each side are two large deep impressions, separated from each other by an oblique ridge. The elytra are at the base a little broader than the thorax, a little wider posteriorly, red, with a black (or bluish black) patch extending from the base to the posterior two thirds, leaving the margins and the apex red; each elytron has five impressed lines, the interstices narrow and slightly convex. The penultimate segment of the abdomen has a trapezoidal emargination at the apex.

**Calochromus æmulus.**

(Plate I. fig. 11.)

*Waterh., Cistula Ent.*, ii. 1877, p. 198.

Niger, subopacus; thorace medio canaliculato, utrinque biimpresso; elytris dimidio basali ferrugineo-flavo, singulis tricostatis. Long. 3½-4¾ lin.

*Hab.* Sarawak (*Wallace*).

Head convex, shining, rather closely and excessively finely punctate.

tured; rostrum very short, strongly transverse; at the base of each antenna there is a slight round tumour; mandibles pithy. Thorax shining, clothed with very delicate grey pubescence, only visible in some lights. Elytra densely pubescent; each elytron with three distinct roof-like costae, and with an indication of a fourth.

♂. Antennæ nearly as long as the elytra; third joint a little elongate, very obliquely truncate at the apex; fourth joint as long as the two preceding taken together, compressed, broader than the third; the fifth to tenth the same length as the third, the eighth, ninth, and tenth diminishing in width, the fifth to eighth with the lower anterior angle a little produced, the eleventh joint a little longer and much narrower than the preceding. Thorax subquadrate, rather straight at the sides, arched in front, with a deep mesial longitudinal channel, and on each side two deep foveæ, the raised portion dividing the foveæ oblique. Penultimate segment of the abdomen triangularly emarginate at the apex, and with a deep longitudinal mesial channel.

♀. Antennæ two thirds the length of the elytra; third joint as broad at its apex as long, fourth to ninth scarcely longer than broad, the tenth a little narrower, eleventh narrowed at the apex. Thorax a little broader than long, rather narrowed in front. The rest as in the male.

### *Calochromus rugatus.*

(Plate I. fig. 4.)

*Waterh., Cistula Ent.*, ii. 1877, p. 199.

Elongatus, niger; elytris piceo-testaceis, dense rubro-sericeis, striis impressis, interstitiis convexiusculis, secundo et quarto fere costatis. ♂. Long.  $5\frac{1}{2}$  lin.

*Hab.* Allahabad (*J. C. Bowring, Esq.*).

Head gently convex, impressed on the forehead; rostrum extremely short, the space between the antennal pit and the base of the mandible about half the diameter of the antennal pit. Antennæ about two thirds the length of the elytra and (for the genus) rather slender; the sixth to tenth joints slightly diminishing in length and a trifle more slender; eleventh joint a little longer, parallel, scarcely acuminate at the apex. Thorax black, margined, delicately pubescent; disk transversely impressed behind the middle, deeply impressed in front of and behind the oblique lateral ridge. Penultimate segment of the abdomen with a deep incision.

### *Calochromus ruber.*

(Plate I. fig. 6.)

*Waterh., Cistula Ent.*, ii. 1877, p. 199.

Elongatus, niger, supra piceo-testaceus, dense rubro-sericeus;

thorace medio longitudinaliter canaliculato, lateribus bifoveatis; elytris minus elongatis unicoloribus, obsolete bicostatis. ♀.

Long.  $5\frac{3}{4}$  lin.

*Hab.* Allahabad (*J. C. Bowring, Esq.*).

Antennæ compressed; the third joint as long as the two preceding together; fourth a little longer, truncate at the apex; fifth to ninth nearly the same form, but gradually more obliquely truncate at the apex, so that the lower anterior angle becomes more acute but is not produced; the tenth joint is rather smaller, very obliquely truncate; the eleventh narrow, parallel, acuminate at the apex.

This species is very close to *C. rugatus*, but the lateral oblique ridge of the thorax is placed more posteriorly, and the lateral impressions are not so well defined; the space between the antennal pit and the base of the mandible is also much greater.

### *Calochromus velutinus.*

(Plate I. fig. 7.)

*Waterh., Cistula Ent.*, ii. 1877, p. 199.

Elongatus, picco-niger, supra picco-testaceus, dense flavo-rufosericeus; thorace sat transverso, medio canaliculato, utrinque fortiter impresso; elytris obsolete bicostatis; abdomine cyaneo nigro.

Long.  $5\frac{1}{2}$  lin.

*Hab.* Burmah (*J. C. Bowring, Esq.*).

Rather shorter and broader than *C. ruber*, the thorax more transverse, and with the ridge which divides the lateral impressions much more directed forwards; rostrum almost none, *i. e.*, the space between the antennal pit and the base of the mandible is less than half the diameter of the pit, whilst in *C. ruber* this space is quite equal to the diameter of the antennal pit. The third joint of the antennæ is as long as the first, as long as its greatest width, obliquely truncate at the apex; the fourth joint as long as the two preceding together, a little longer than broad, very little narrowed at the base, straight at the apex; the fifth to tenth about the same length as the fourth, but gradually diminishing in width, scarcely oblique at the apex, their lower anterior angle a little less than a right angle; the eleventh joint much narrower, longer, parallel, acuminate at the apex. The thorax one sixth broader than long, a little narrower in front; disk convex, with a rather fine mesial channel; the sides deeply impressed, the usual oblique ridge very much directed forwards, almost parallel with the lateral margin. Elytra very gradually and very little enlarged posteriorly; each elytron with two narrow slightly raised costæ, with an indication of a third.

### *Calochromus segregatus.*

(Plate I. fig. 8.)

Depressus, cyaneo-niger; thorace elytrisq. ochraceo-rufis.

thorace sat depresso latitudine paulo breviori, medio lineâ tenui impresso; elytris striis plurimis. ♀. Long.  $4\frac{1}{2}$  lin.

*Hab.* Java (*J. C. Bowring, Esq.*).

Most nearly allied to *C. velutinus*, but more depressed. Thorax above less uneven, the mesial line finer, the sides rather straighter; the lateral ridge is less strong, a little more posterior, and very short. Scutellum red at the apex. Elytra nearly parallel, flat; each elytron with about seven finely impressed lines, the interstices flat; the extreme apex is bordered with black.

### **Calochromus tarsalis.**

(Plate I. fig. 9.)

Niger, parallelus; thorace transversim quadrato, lateribus rufis, haud marginatis; elytris rufis haud striatis; pedibus tenuibus, tarsis longis gracilibus. Long.  $3\frac{1}{4}$  lin.

*Hab.* India.

General form and appearance of *Lypsipterus sanguineus*, but a little narrower. Rostrum none. Antennæ slender. Thorax a little broader than long, straight at the sides, which are red, the disk with a fine mesial line; the lateral margins not incrassated; a slight swelling near the posterior angle indicates the usual lateral plica. Elytra as in *L. sanguineus*, but with no visible striæ.

### **Calochromus vestitus.**

(Plate II. fig. 2.)

*Waterh., Cistula Ent.*, ii. 1877, p. 200.

Elongatus, postice paulo ampliatus, niger, vix cyanescens; thorace nigro (vel rubro), tenuissime rubro-sericeo; elytris rufo-testaceis, dense rufo-sericeis, costatis, apice nigro.

♂. Long. 3-4 lin.

♀. Long. 5-6 lin.

*Hab.* Penang (*J. C. Bowring, Esq.*).

♂. Antennæ about two thirds the length of the elytra, moderately broad in the middle, tapering to the apex. Rostrum extremely short, the space between the antennal pit and the base of the mandible about one third the diameter of the antennal pit. Thorax black, clothed with very fine silky-red pubescence, only visible in certain lights; the discoidal channel rather deep, the lateral impressions deep and well-defined. Scutellum black. Elytra clothed with bright red pubescence; each elytron with two not very prominent costæ. The underside and the legs black, scarcely tinged with blue. Penultimate segment of the abdomen emarginate.

♀. Antennæ rather shorter and broader than in the male. Rostrum a little more prominent; the space between the antennal pit and the base of the mandible about half the diameter of the pit.

Thorax reddish yellow, with the sides and the mesial line black. Each elytron with three distinct costæ, the apex broadly black.

*Var.* ♀. Thorax entirely red, the pubescence more dense. Elytra bicostate, the costæ narrower.

### **Calochromus lepidus.**

(Plate II. fig. 3.)

*Waterh., Cistula Ent.*, ii. 1877, p. 201.

Cærnleus, nitidus; thorace vix brevissime pubescente; disco longitudinaliter fortiter impresso, lateribus biimpressis; elytris piccostaceis, dense fulvo-rufo-pubescentibus, striis vix perspicue impressis, apice angusto nigro; antennis pedibusque violaceis.

Long.  $3\frac{1}{2}$ – $4\frac{1}{2}$  lin.

*Hab.* Java (♂), Penang (♀) (*J. C. Bowring, Esq.*).

A more slender species than any of the preceding, and rendered distinct by the beautiful shining blue thorax and violet antennæ. The anterior angles of the thorax are much deflexed, and consequently do not show the margin so distinctly; the disk has not a fine mesial line, but a deep longitudinal impression; the lateral fossæ are deep, but the oblique ridge which divides them is not so well defined as in most of the species.

♂. Antennæ rather slender. Elytra with scarcely any trace of costæ. Penultimate segment of the abdomen with a deep incision.

♀. Antennæ very slightly dilated. Thorax more narrowed in front. Elytra bicostate.

The two examples in the collection are from different localities, but there is no doubt that they should be associated as sexes of the same species.

### **Calochromus longipennis.**

(Plate II. fig. 4.)

*Waterh., Cistula Ent.*, ii. 1877, p. 201.

Elongatus, subparallelus, niger; thorace supra picco, dense rufo-pubescente, medio foveolâ lanceolatâ impresso, lateribus biimpressis; scutello picco, rufo-pubescente; elytris longissimis, dense rufo-pubescentibus, ad apicem nigris, costatis, costis angustioribus. ♀.

Long.  $6\frac{1}{4}$  lin., lat.  $1\frac{3}{5}$  lin.

*Hab.* Sumatra (*E. C. Buxton, Esq.*).

Forehead evenly convex, black, very finely pubescent, rostrum about three times as broad as long; maxillary palpi very stout. Antennæ three quarters the length of the elytra, compressed; the third joint about twice as long as broad, emarginate at the apex; the fourth to ninth joints about equal in length, the lower anterior angle obliquely and much produced, increasingly so as they approach

the apex; the tenth joint very oblique, a little smaller than the ninth, the eleventh compressed, fusiform. Thorax a little broader than long, somewhat narrowed in front, all the angles distinct but obtuse, with bright red pubescence; the disk convex, with a deep lanceolate fovea nearly reaching from the anterior to the posterior margins. Elytra very long, with bright red pubescence; each elytron with three not very distinct narrow costæ, the outer one very obsolete.

There can be no doubt that *Micronychus bimaculatus*, Motsch. (Bull. Mosc., 1861, i. p. 138), from Ceylon, is closely allied to *C. longipennis*. It differs from it in having the forehead clothed with bright red pubescence, the thorax is much longer, the anterior angles are more deflexed, and the lateral fold is not so near the posterior angles. The British-Museum example has the elytra uniform bright red, the costæ are not so prominent as in *C. longipennis*.

Section III. *Intermediate coxæ of the male with a strong spine; base of the femur with a strong tooth; tibiæ curved.*

### **Calochromus dispar.**

(Plate II. fig. 1.)

*Waterh., Cistula Ent.*, ii. 1877, p. 202.

Cyaneo-niger, sat nitidus; elongatus, parum convexus; thorace marginato, medio canaliculato, utrinque biimpresso; elytris rufis, dense pubescentibus, postice paulo ampliatis. ♂. Long. 6 lin.

*Hab.* Borneo (*J. Russell*).

This species has somewhat the appearance of *C. orbatus*, but has the elytra more ample posteriorly, less bluntly rounded at the apex, and the thorax is margined all round. The antennæ are nearly as long as the elytra, not very approximate at their base. Clypeus gently emarginate. Intermediate coxæ with a strong acute spine; the femur with a strong tooth near the base; the intermediate and posterior tibiæ strongly curved. The penultimate segment of the abdomen is deeply notched in the middle.

### **DEMOSIS.**

*Lycus* (genus 4), *Waterh., Trans. Ent. Soc.*, 1878, p. 97.

Antennæ short, compact, dentate, of equal width throughout; the third joint a trifle longer than broad, the fourth to tenth joints transverse. Rostrum distinct but short. Thorax rather transverse, quadrangular; the disk smooth, the margins reflexed. Elytra flattened, subparallel, with moderately distinct costæ, the intervals punctured.



**Demosis peltatus.**

(Plate II. fig. 5.)

Parallelus, depressus, picco-niger; thoracis limbo elytrisq. flavis, his apice nigris; abdominis marginibus late flavis. Long.  $3\frac{1}{2}$  lin.

*Hab.* Lake N'Gami (*Andersson*).

Nearly parallel, the elytra very little wider than the thorax. Head and the basal joints of the antennæ very slightly pithy. Thorax nearly one third broader than long, yellow, shining and black in the middle; the sides subparallel, reflexed, the posterior angles very slightly prominent. Elytra very finely pubescent, widest rather before the middle; each elytron with four obtuse costæ, the third abbreviated, the fourth continued over the shoulder, the intervals rugulose and obscurely punctured, the apical third black.

At the time my account of the genera of *Lycidæ* was written (*Trans. Ent. Soc.*, 1878) this species was considered to be the *Lycus scrobicollis* of Fåhræus, and is the species referred to under "Genus 4" at p. 97. I have, however, since seen a different species named *L. scrobicollis*, one which in some respects agrees better with Fåhræus's description. It seems best therefore to consider the insect from Lake N'Gami a new species.

**LIPERNES.**

Characters of *Lycostomus*, but with the palpi short and thick; the apical joint of the maxillary palpi nearly as broad as long, convex, nearly straight on the outer side, rounded on the inner side. Thorax with a mesial impressed line, the margins thickened and narrowly reflexed. Each elytron with four costæ, the fourth not elevated at the shoulder.

**Lipernes perspectus.**

(Plate II. fig. 11.)

Niger, nitidus; thorace medio longitudinaliter impresso, marginibus anguste reflexis, angulis posticis acutis; elytris thorace paulo latioribus, subparallelis, testaceo-rufis, rugulosis, circa scutellum anguste nigro-cinctis. ♀. Long.  $5-6\frac{1}{2}$  lin., lat.  $2\frac{1}{4}-2\frac{3}{4}$  lin.

*Hab.* Shanghai (*Fortune*).

Rostrum short, about as long as broad; apical joint of the maxillary palpi very thick and ovate. Antennæ moderately long and slender. Thorax rather small, scarcely narrowed in front; the mesial longitudinal channel is wider in the middle.

One example has the extreme margins of the thorax rusty red.

## LYCOSTOMUS.

*Motsch., Bull. Mosc., 1861, i. p. 136.*

**Lycostomus similis.**

(Plate II. fig. 6, ♀.)

*Lycus similis*, Hope, *Gray's Zool. Miscell.*, 1831, p. 26, ♂.

*Lycus triangularis*, Hope, *l. c.* p. 26, ♀.

*Lycus suturalis*, Redtenbacher, *Hügel's Kaschm. Ins.*, 1848, iv. p. 508, t. 23, f. 7.

*Lycus geminus*, Walker, *Ann. & Mag. N. Hist.*, 1858, ii. p. 281.

*Lycus cinnabarinus*, Candèze, *Mém. Liège*, 1861, p. 355, t. 3, f. 1 c.

*Lycostomus coccineus*, Motsch., *Bull. Mosc.*, 1861, i. p. 136, t. 9, f. 13.

Niger, thoracis lateribus elytrisque rufis.

Long.  $5\frac{1}{2}$ –10 lin., lat.  $3$ – $4\frac{1}{2}$  lin.

*Hab.* Nepal (*Gen. Hardwicke*), Allahabad and Siam (*J. C. Bowring, Esq.*), Ceylon (*Dr. Thwaites*), Bootan (*Dr. Pemberton*).

This species is very close to *L. ferrugineus*, F., but is relatively a little shorter, and the elytra are less parallel, more ample posteriorly and more evidently arcuate at the sides. The antennæ are distinctly more slender. The thorax varies immensely in form, but is generally narrower in the ♂ than in the ♀; the disk is black, frequently traversed by a fine mesial red line. The elytra are entirely deep red; a single example only has a short blackish stripe on the second interstice.

*L. ferrugineus*, F. (*Ent. Syst. Suppl.*, p. 125), with which the present species is above compared, will very probably prove to be a variety of *Lycus marginatus*, Fabr. (*Syst. El.*, ii. p. 110). *L. melanurus*, Blanch. (*Voy. Pôle Sud*, iv. p. 74, t. 6, f. 2), and *L. bivittatus*, Kirsch (*Mittheil. aus. d. k. zool. Museum zu Dresden*, 1875, i. p. 34), are evidently synonymous with *marginatus*.

**Lycostomus æqualis.**

(Plate II. fig. 7.)

Niger, subparallelus; thoracis limbo, elytris abdominisque lateribus rufis.

Long. 8 lin., lat.  $3\frac{1}{4}$  lin.

*Hab.* China (*J. C. Bowring, Esq.*).

Closely allied to *similis*, Hope, but much more parallel in form. Antennæ a little less slender than in that species. Rostrum a little shorter, and thicker at the base. Thorax broad, blackish in the middle. Elytra subparallel, red, the costæ nearly parallel; at the posterior two thirds, the fourth costa is not further distant from the margin than it is from the third costa, the margin itself is more thickened.

The fine pubescence which clothes the upper surface of the insect is more distinct than in *similis* and is golden red.

**Lycostomus vulpinus.**

(Plate II. fig. 8.)

Fusco-niger; rostro, thoracis limbo elytrisq. rufo-testaceis, his postice sat ampliatis, apice rufis. Long. 6 lin.

*Hab.* Sumatra (*Sir Stamford Raffles*).

Near *L. similis*, Hope, but the teguments are more delicate, the colour flesh-colour, and the thorax has the sides less reflexed. Rostrum reddish testaceous, a little longer than broad. Antennæ rather shorter than in *similis* and less broad. Thorax with the sides moderately reflexed, the posterior angles prominent and acute, the disk somewhat infuscated. Scutellum black, parallel at the sides, truncate at the apex. Elytra gradually but not much enlarged posteriorly, the sides rather straight, only arcuate near the apex; the third costa is somewhat indistinct, the fourth is strong, and forms a strong well-marked carina over the shoulder, more elevated than in *similis*.

**Lycostomus modestus.**

(Plate II. fig. 10.)

Niger, opacus; thoracis lateribus elytrisq. ferrugineo-rufis, regione scutellari angusto infuscato. Long. 6 lin., lat.  $2\frac{1}{3}$  lin.

*Hab.* Bootan (*Pemberton*), India (*Boys*).

Opaque above. Rostrum a little longer than its width at the base, narrowed towards the apex. Antennæ narrow and linear. Thorax trapeziform; the disk flat, dull black; the sides reflexed, red. Elytra dull red, slightly wider at the apex; each elytron with four equidistant costæ; the interstices with rough transverse reticulation; the first, second, third, and fourth interstices with an indication of an interrupted intermediate costa.

♂. Antennæ a little more than half the length of the elytra, rather slender, all the joints elongate.

♀. Antennæ half the length of the elytra, the eighth and ninth joints scarcely longer than broad, the tenth as broad as long.

**Lycostomus ambiguus.**

(Plate III. fig. 3.)

Fusco-niger, opacus, ferrugineo-pubescent; thoracis limbo, elytris abdominisque lateribus ferrugineo-rufis.

Long. 6-8 lin., lat.  $2\frac{3}{4}$ - $3\frac{1}{4}$  lin.

*Hab.* Cachar (*J. C. Bowring, Esq.*).

♂. Rostrum moderate, about a quarter longer than its width at the base. Antennæ rather slender, about half the length of the elytra. Thorax with the margins moderately reflexed, dull red, the

disk blackish, the anterior and posterior margins narrowly bordered with red, the posterior angles acute. Scutellum black. Elytra dull red, gradually widening to near the apex; each elytron with four costæ, the intervals roughly punctured, but with no distinct reticulation. Margins of the abdominal segments dull brick-red.

♀. Rostrum long and slender. Antennæ a trifle shorter than in the male. Thorax very broad, the margins broadly reflexed and expanded, the sides rectilinear, the posterior angles a little less than right angles, the disk more or less blackish. Elytra dull red. Abdomen dull brick-red, blackish in the middle at the base.

The two specimens above described as sexes are very dissimilar, but they have so much in common, besides the peculiar rusty-red colour, that there is little doubt that they should be associated as sexes.

### *Lycostomus singularis.*

(Plate II. fig. 9.)

Niger, opacus; thoracis lateribus elytrisque ferrugineo-rufis. ♀.  
Long.  $6\frac{3}{4}$  lin., lat.  $2\frac{3}{4}$  lin.

*Hab.* South India (*Walhouse*).

Very close to *L. modestus*, but differs in having no black on the elytra near the scutellum, and the sculpture of the elytra is much finer and without reticulation.

### *Lycostomus rufiventris.*

(Plate III. fig. 2.)

Fusco-niger, opacus; thoracis limbo, antennarum articulis tribus basalibus, abdomine elytrisque ferrugineo-rufis, his apice nigris.  
Long. 7 lin., lat. 3 lin.

*Hab.* Burmah (*J. C. Bowring, Esq.*).

Parallel. Rostrum rather long, yellowish red. Antennæ moderately long and slender, gradually tapering from the fourth joint; the first three joints pale red. Thorax somewhat trapeziform, a little narrowed in front, pale red; the disk black; the margins broadly reflexed, the sides rectilinear, the posterior angles a little less than right angles. Scutellum red. Elytra somewhat parallel, rather pale red. Coxæ and abdomen reddish.

With the specimens above described are associated two other examples, which have the rostrum black, but do not differ materially in any other respect, and may therefore safely be considered varieties.

*Hab.* Burmah. Moulmein (*Archdeacon Clerk*).

**Lycostomus internexus.**

(Plate III. fig. 4.)

*Walker, Ann. & Mag. Nat. Hist.*, 1858, ii. p. 282.

Fusco-niger, opacus; thorace, scutello elytrisq. ochraceo-rufis,  
his apice nigris. Long. 6 lin., lat.  $2\frac{1}{2}$  lin.

*Hab.* Ceylon (*Dr. Thwaites*).

♂. Rostrum about twice as long as broad. Antennæ rather slender, a little more than half the length of the elytra, black, the third joint slightly ferruginous. Thorax rather small, narrowed in front, the sides moderately reflexed, posterior angles rather acute; disk usually with a transverse fuscous line in front and behind. Elytra narrow at the base, slightly and gradually enlarged till near the apex, the sides gently arcuate posteriorly. Legs black. Abdomen rusty red.

♀. Abdomen black, with the sides margined with red.

The original type of this species is a male.

**Lycostomus analis.**

(Plate III. fig. 5.)

*Lycus analis*, *Dalm., Schönh. Syn. Ins.*, iii. App. p. 30, t. 5. f. 10.*Lycus divisus*, *Walker, Ann. & Mag. Nat. Hist.*, 1858, ii. p. 282.*Lycus planicornis*, *Walker, l. c.*

Ochraceus; antennis (basi excepto), tarsis elytrorumque apice  
nigris. Long.  $4\frac{1}{2}$ –7 lin., lat.  $2\frac{1}{4}$ – $3\frac{1}{4}$  lin.

*Hab.* Ceylon (*Dr. Thwaites*); N. Bengal (*Lieut. Campbell*); Dacca (*J. C. Bowring, Esq.*).

This species is very close to *L. internexus*, but has the teguments rather more delicate, the colour is paler; it is usually of a broader form, and the elytra are more ample, the sides posteriorly being more strongly arcuate. The antennæ have the first three joints usually pale, but some examples have as many as seven pale joints.

♂. Legs black, with the base of the femora pale.

♀. Legs yellowish, with the tarsi and sometimes the apex of the tibiæ black.

Mr. Walker's type of *L. divisus* is merely a small example of his *L. planicornis*; both are females.

**Lycostomus nigripes.**

(Plate III. fig. 6.)

*Pyrochroa nigripes*, *Fabr., Mant. Ins.*, i. p. 163.

Rufo-testaceus; antennis articulis  $4^{10}$ – $11^{um}$ , femorum apice, tibiis tarsisque nigris; thorace triangulari, sericeo-pubescenti; elytris postice sat ampliatis. Long.  $5\frac{1}{2}$  lin., lat.  $2\frac{3}{4}$  lin.

*Hab.* Siam (*Banks*); Penang (*J. C. Bowring, Esq.*).

Pinkish-testaceous. Rostrum a little longer than its width at the base. Thorax in the form of an equilateral triangle, the sides moderately reflexed. Elytra widened a little below the shoulders, rather ample before the apex, the sides rather strongly arcuate. Legs black, except the base of the femora. ♀.

The foregoing description is taken from the original type in the Banksian collection. The specimen is said to come from Siam.

There are three specimens in the British-Museum collection from Penang which agree very nearly with the Fabrician type, but the colour is more yellow, the thorax less regularly triangular, and the sides are not so suddenly reflexed. The male example is entirely pale below, with the apex of the posterior tibiæ and the tarsi fuscous, and the apex of the elytra is black; the two females have the elytra entirely yellow, the metasternum and abdomen are more or less dusky, and the legs are blackish, with the base of the femora pale.

### *Lycostomus placidus.*

(Plate III. fig. 7.)

Ochraceus; antennarum articulis 4<sup>to</sup>–11<sup>um</sup>, palpis, tibiis tarsisque nigris. Long. 4–7 lin., lat. 1½–3½ lin.

*Var.* 1. Femoribus apice nigris. ♂, ♀.

*Var.* 2. Elytris apice nigris. ♂, ♀.

*Hab.* Hong Kong (*J. C. Bowring, Esq.*).

Pale ochreous. The eyes, the fourth to the eleventh joints of the antennæ, the tibiæ, and tarsi black. Thorax narrowed in front, the disk somewhat shining. Elytra not much enlarged towards the apex, the sides rather straight, the humeral ridge not very strong.

This species differs from *L. nigripes* in being longer in the elytra, which are also a little more parallel. The thorax varies immensely, but appears to be always relatively longer than in *L. nigripes*, and the disk is more shining. The legs are generally black, except at the base of the femora, but a small example has the femora almost entirely yellow.

The specimens which have the apex of the elytra black are the largest specimens, and have the thorax broader than in those with unicolorous elytra; but the largest unicolorous specimen and the smallest example with black apex to the elytra agree so nearly in size and form that I cannot consider them distinct species. The specimens appear nearly all to have been taken together, and are marked by Mr. Bowring 25/750.

The variety with the black apex to the elytra much resembles some specimens of *L. analis*, but may be distinguished by the relatively longer elytra (which are not so much arcuate at the sides), and by the form of the thorax, which is less trapeziform and less silky than in *analis*.

**Lycostomus angustatus.**

(Plate III. fig. 9.)

Piceo-fuscus, elongatus, angustus; thorace elytrisq. sordide flavis, illo medio plus minusve infusato.

Long.  $4\frac{1}{2}$ –5 lin., lat.  $1\frac{1}{2}$ –2 lin.

*Hab.* Java (*J. C. Bowring, Esq.*).

Distinct from all its allies by its elongate narrow form. Rostrum yellowish, a little longer than broad. Antennæ half the length of the elytra, slender, fuscous, the basal joint a little paler. Thorax elongate trapeziform, much narrower in front; the disk a little fuscous; the sides narrowly reflexed, rectilinear; the posterior angles very acute. Scutellum fuscous. Elytra very long, narrow at the base, moderately enlarged posteriorly; the sides rectilinear for two thirds their length, then gently arcuate. Legs fuscous, the coxæ paler. Abdomen shining, pitchy.

**Lycostomus debilis.**

(Plate III. fig. 8.)

Nigrescens, subnitidus; thoracis lateribus elytrisq. fusco-testaceis, his rugosis.

Long.  $5\frac{2}{3}$ –7 lin., lat. 3 lin.

*Hab.* N. China (*J. C. Bowring, Esq.*).

Teguments delicate and less opaque than in any of its allies. Rostrum long and slender. Antennæ long and slender, the third joint very long (sometimes obscure testaceous). Thorax rounded in front, widened behind, the posterior angles rather acute, the anterior and lateral margins obscure testaceous, the sides only slightly reflexed. Scutellum blackish. Elytra long, slightly wider at the apex, brownish testaceous, moderately shining, the intervals between the costæ very rugose. Sides of the abdomen pitchy.

**Lycostomus striatus.**

(Plate III. fig. 11.)

Elongatus, subparallelus, nigrescens; rostro sat brevi; thorace lato, lateribus parum reflexis, flavis; elytris subparallelis, postice parum latioribus, sordide testaceis, multicostatis, interstitiis rugulosis.

Long. 7 lin., lat.  $2\frac{1}{2}$  lin.

*Hab.* India (*McClelland*).

Rostrum a little longer than its width at the base. Antennæ rather short. Thorax very broad; the sides much expanded, scarcely reflexed, yellowish. Scutellum black. Elytra long, not quite as broad as the thorax at their base, a little wider towards the apex, testaceous, slightly tinged with blackish round the scutellum; each elytron with nine costæ, the alternate ones rather irregular, interstices strongly punctured and with numerous irregular transverse rugæ.

**Lycostomus thoracicus.**

(Plate III. fig. 1.)

Latus, niger; thorace lato, lateribus explanatis, flavo-rufis; elytris basi thorace haud latioribus, medio rotundato-ampliatis, rufis, circa scutellum anguste nigris. Long.  $8\frac{1}{2}$  lin., lat. 4 lin.

*Hab.* Bootan, ♂, ♀ (*Dr. Pemberton*); Sikkim, ♂, ♀ (*Dr. Hooker*); Darjeeling (*Dr. Pearson*).

Rostrum a little longer than its width at the base. Thorax very broad, black in the middle and shining; the sides very much expanded, reflexed, yellowish, or reddish yellow. Elytra narrow at the base, dull red, very rugose, widened immediately below the shoulders, broadest across the middle, rounded at the sides. Sides of the abdomen shining pitchy.

♂. Legs with the femora yellow at the base.

♀. Legs black.

**LYCUS.**

*Fabr., Mantissa Insectorum*, i. 1787, p. 163.

**Lycus pyriformis.**

(Plate IV. fig. 2.)

*Murray, Ann. & Mag. Nat. Hist.*, 1868, i. p. 328.

Niger; thorace elytrisq. flavis, thorace medio, scutello, elytris regione scutellari et apice internè sinuatim nigris, his quadricostatis costâ humerali parum elevatâ, lateribus parum reflexis. ♂.

Long. 5-6 lin., lat. 4 lin.

*Hab.* Old Calabar.

Thorax black, with the slightly reflexed sides and the anterior margin dull yellow. Elytra obscure yellow, the scutellar region (as far as, but not including, the humeral costa) and the apex black.

**Lycus ustus.**

(Plate V. fig. 7.)

*Murray, Ann. & Mag. Nat. Hist.*, 1868, i. p. 329, pl. ix. f. 17.

Niger; thorace lateribus et elytris (regione scutellari et marginibus exterioribus posticis exceptis) flavis. ♀.

Long. 6 lin., lat. 3 lin.

*Hab.* Old Calabar.

Thorax with the posterior angles very acute. Elytra dull, densely and rugosely punctured; the fourth costa thickened and forming a very distinct ridge over the shoulder.

This species is allied to *L. pyriformis*, but is much narrower.



**Lycus scapularis.**

(Plate IV. fig. 3.)

*Murray, Ann. & Mag. Nat. Hist.*, 1868, i. p. 327.

Fuscus; thorace clytrisque flavo-testaceis, his humeris paulo inflatis, apice nigris; antennis pedibusque nigris; abdomine piceo. ♀.  
 Long. 8 lin., lat.  $3\frac{1}{4}$  lin.

*Hab.* Old Calabar.

Thorax pale yellow, smooth and shining in the middle, the gently reflexed sides closely and moderately finely punctured. Elytra pale yellow, slightly inflated and dilated at the shoulders; each elytron with four costæ, the third not extended over the humeral swelling, the fourth forming the margin to the humeral dilatation. The underside fuscous, the abdomen pitchy.

**Lycus palliatus.**

(Plate IV. fig. 5.)

*Pyrochroa palliatus, Fabr., Syst. Ent.*, p. 203.*Lycus palliatus, Fabr., Syst. El.*, ii. p. 110.

Niger; thoracis angulis anticis clytrisque flavis, his apice nigris.  
 Long. 6-8 lin.

*Hab.* South Africa (*Banksian Coll.*); Natal.

This species is easily recognized by the black thorax, having the anterior two thirds of the reflexed margin deep yellow, the line of demarcation between the yellow and black clearly defined. The black at the apex of the elytra extends for rather more than a quarter of their length. The region of the scutellum is frequently dusky; but it is not so in the type specimen, which is a male.

♂. Elytra nearly as broad as long, inflated; the margins not visible from above, except posteriorly.

♀. Elytra subparallel.

**Lycus xanthomelas.**

(Plate IV. figs. 1 &amp; 4.)

*Lycus xanthomelas, Dalm., Schönh. Syn. Ins.*, App. 1817, p. 26, pl. 5.  
 f. 5, ♀.

*Lycus immersus, Murray, Ann. & Mag. Nat. Hist.*, 1868, i. p. 324,  
 pl. ix. figs. 2 & 3.

Niger, supra flavus; elytris postice nigris.

♂. Long. 6-9 lin., lat. 5-7 lin.

♀. Long.  $5\frac{1}{2}$ -8 lin., lat. 2-3 lin.

*Hab.* Old Calabar.

♂. Usually smaller than *L. foliaceus*, and differs in having the black at the apex of the elytra nearly straight in front. The elytra are also somewhat different in form, being broadest a little behind

the middle, while in *L. foliaceus* the expansion is nearly oblong-ovate and widest in the middle.

♀. Differs only from the female of *L. foliaceus* in having the black at the apex of the elytra straight in front.

Mr. Murray states that the female of his *L. immersus* is *L. xanthomelas*, Dalm., and there seems to be little doubt that this is correct. Under these circumstances it appears better to adopt the older name, although only originally applied to the female.

### **Lycus semiamplexus.**

(Plate IV. figs. 6 & 9.)

*Murray, Ann. & Mag. Nat. Hist.*, 1868, i. p. 325, pl. ix. figs. 4 & 5.

Niger, supra flavus; elytris margine posteriore nigro.

♂. Long.  $5\frac{1}{2}$ – $6\frac{1}{2}$  lin., lat.  $4$ – $4\frac{1}{2}$  lin.

*Hab.* Old Calabar.

Still smaller than *L. xanthomelas*, with the black at the apex of the elytra continued along the sides to about the middle.

### **Lycus aspidatus.**

(Plate IV. fig. 8.)

*Murray, Ann. & Mag. Nat. Hist.*, 1868, i. p. 325, pl. ix. figs. 4 & 5.

Niger, supra flavus; elytris postice nigris, disco obtuse elevato.

♂. Long.  $7\frac{1}{2}$  lin., lat.  $5\frac{1}{4}$  lin.

*Hab.* Old Calabar.

Allied to *L. xanthomelas*, but very distinct from its allies on account of the suture of the elytra about the middle being conically elevated.

There is a specimen in the Museum collection from Angola which differs from the type in having some yellow in the middle of the black apical half of the elytra; the disk of the thorax is also more distinctly fuscous.

### **Lycus subcostatus.**

(Plate IV. fig. 7.)

*Murray, Ann. & Mag. Nat. Hist.*, 1868, i. p. 327.

Niger, supra flavus; thoracis disco, scutello elytrorumque apice nigris; elytris sublinearibus, quadricostatis, costâ secundâ bene elevatâ, humeris costatis.

♂. Long.  $5\frac{1}{2}$  lin., lat.  $2\frac{1}{2}$  lin.

*Hab.* Old Calabar.

Not unlike the female of *L. foliaceus*, but the disk of the thorax is black, and the posterior angles are more acute. The elytra are roughly punctured and are less parallel, the second costa is very

acute and prominent, and the shoulders are laterally expanded, the base of the fourth costa forming the edge of this expansion.

Mr. Murray described this specimen as a female; it is, however, undoubtedly a male.

### **Lycus melanurus.**

(Plate V. figs. 2 & 3.)

*Lycus melanurus*, *Dalm., Schönh. Syn. Ins.*, App. p. 23, t. 5. f. 7, ♀.

*Lycus æolus*, *Murray, Ann. & Mag. Nat. Hist.*, 1868, i. p. 331, pl. ix. f. 19, ♂.

Niger; thoracis lateribus elytris que aurantiacis, his ad apicem nigro-cinctis; abdominis lateribus rufo-flavis.

♂. Long. 8 lin., lat. 6 lin.

♀. Long. 7-8 lin., lat. 3½ lin.

*Hab.* Old Calabar, Congo, Abyssinia, Pt. Natal, Zambesi.

♂. Very close to *L. latissimus*, L., but besides the absence of the lateral black spot on the elytra, it differs in having the apex of the elytra less broadly truncate, and the lateral expanded portion is more inflated towards its base.

♀. The female differs from that of *latissimus* in having the costa at the shoulder of the elytra less elevated and less semicircular in outline.

### **Lycus elegans.**

(Plate V. figs. 5 & 6.)

*Murray, Ann. & Mag. N. Hist.*, 1868, i. p. 332, pl. ix. f. 20.

*L. melanuro* affinis, et sat similiter coloratus, sed elytrorum lateribus postice angustius nigro-marginatis.

♂. Long. 8-9 lin., lat. 5½ lin.

♀. Long. 10-11 lin., lat. 5 lin.

*Hab.* Old Calabar.

Extremely close to *L. latissimus*, and only to be distinguished by the black at the apex of the elytra, the inner margin of which is parallel to the line of the side and is not suffused at the apex. The male has the apex of the elytra perhaps a little less broadly truncate, and the female has the costal ridge less elevated.

### **Lycus latissimus.**

(Plate V. figs. 1 & 4.)

*Lampyrus latissima*, *Linn., Syst. Nat.*, i. ii. p. 466.

*Pyrochroa latissima*, *Fabr., Syst. Ent.*, p. 203.

*Lycus latissimus*, *Oliv., Ent.*, ii. 29, p. 5 (not of figure).

*Lycus latissimus*, *Fabr., Ent. Syst.*, i. p. 106.

*Lycus ptemorsus*, *Dalm., Schönh. Syn. Ins.*, App. p. 25, t. 5. f. 1, ♂.

*Lycus latissimus*, *Dalm., Schönh. Syn. Ins.*, iii. p. 71, t. 5. f. 3, ♀.

Var. *L. subdenticulatus*, *Murray, Ann. & Mag. N. Hist.*, 1868, i. p. 331.

Var. *L. fenestratus*, Murray, *Ann. & Mag. N. Hist.*, 1868, i. p. 331.

Var. *L. harpago*, Thoms., *Arch. Ent.*, ii. p. 76; Lacord., *Gen. Col.*, Atlas, t. 45, f. 3; Murray, *Ann. & Mag. N. Hist.*, 1868, i. p. 330.

Niger; thoracis lateribus elytrisque aurantiacis, his maculâ laterali apiceque nigris.

♂. Long.  $7-10\frac{1}{2}$  lin., lat.  $4\frac{1}{2}-8$  lin.

♀. Long.  $7-10\frac{1}{2}$  lin., lat.  $3\frac{3}{8}-5\frac{1}{4}$  lin.

*Hab.* Old Calabar, Gaboon, Sierra Leone.

The amount of black on the elytra varies very much in this species. Sometimes there is only a black lateral spot, and an apical border parallel with the margin as in *L. elegans*, but generally the black at the apex is suffused. Sometimes the lateral spot is more or less united with the black at the apex; it is so slightly in the type specimen (♀) of *L. latissimus*, in the Linnean collection. The variety *L. harpago*, Th., has the two lateral spots united by a fascia. Variety *fenestratus*, Murray, has this fascia and the black at the apex confluent. Sometimes the elytra are entirely black except a yellow fascia.

The extent to which the elytra are dilated in the male and the form of the apical truncature appear to vary considerably, while the various systems of coloration above mentioned are not constantly accompanied by any one form of elytra.

With regard to the synonymy given above, it must be noticed that Fabricius does not mention the black in the middle of the thorax, for which reason Guérin (*Rev. Zool.*, 1847, p. 227) provisionally re-named the Fabrician insect *Fabricii*. There can, however, be little doubt that the omission was an oversight on the part of Fabricius, especially as the examples in the Banksian collection (said to have been named by Fabricius) are typical *latissimus*, the male example having the lateral spot on the elytra partly united with the black at the apex as in the Linnean type.

The description given by Olivier applies well to *latissimus*, Linn.; but his figure (*Ent.*, ii. 29, t. 1. f. 2) represents quite a distinct species allied to *L. ampliatus*, Fähr., and is almost certainly the male of the species which he names *L. proboscideus*\* (*Ent.*, ii. 29, p. 8, t. 1. f. 6).

## BROXYLUS.

Rostrum none. Apical joint of palpi very large, long, knife-shaped. Antennæ very compressed, simple. Thorax with an interrupted mesial carina. Elytra very ample, inflated, quadricostate, the interstices divided into subquadrate spaces by transverse carinæ.

The species upon which this genus is founded closely resembles *Calopteron dilatatum*, Bourgeois, but differs in the form of the palpi.

\* This species as well as *ferrugineus*, Fab., *lateralis*, Dalm., and perhaps some other Fabrician species of *Lycus*, appear to be omitted from Gemminger and v. Harold's Catalogue of Colcoptera.

**Broxylus pfeifferæ.**

(Plate V. fig. 8.)

*Calopteron? pfeifferi*, *Waterh., Trans. Ent. Soc.*, 1878, p. 106.

Sordide flavus; thorace parvo, antice angustato, carinâ longitudinali medianâ medio interruptâ; elytris valde inflatis, convexis, cyaneis, nitidis, reticulatis. Long.  $4\frac{1}{3}$  lin., lat. elytr.  $3\frac{1}{4}$  lin.

*Hab.* Celebes (*Wallace*).

Head small, semicircularly impressed above. Antennæ long, subparallel, a little narrower at the apex, fuscous, except the basal and two apical joints, which are yellowish. Scutellum yellowish, narrowed towards the apex, the extreme apex slightly emarginate. Elytra of a glassy, dark steel-blue, the extreme base yellowish; each elytron with four strong costæ, the interstices with transverse costæ dividing the whole elytron into quadrangular spaces.

**CALOPTERON.***Guérin, Voy. Coquille*, p. 72.**Calopteron notatum.**

(Plate V. fig. 9.)

*Waterh., Trans. Ent. Soc.*, 1878, pp. 97, 106.

Flavo-testaceum; antennis apicem versus, elytris maculis sex apiceque et tarsis nigrescentibus; thorace medio carinato; elytris quadricostatis, interstitiis costulis transversis. Long.  $4\frac{1}{2}$  lin.

*Hab.* "New Hebrides" (*J. C. Bowring, Esq.*).

The thorax is moderately narrowed in front, with a complete well-defined mesial carina, the posterior angles acute. Elytra at the base not wider than the thorax, gradually but not much wider posteriorly, the three spots on each elytron are rather pale dusky.

Since this species was originally described I have come to the conclusion that it is only a variety of the American *Calopteron tricolor*, Oliv.; in which case the locality with which it is marked must be an error. *C. tricolor* usually has the tibiae dusky, which is not the case in the specimen described as *notatum*; but the species is very variable.

**Calopteron typicum.**

(Plate VI. fig. 1.)

*Digrapha typica*, *Newm., Entomol. Mag.*, 1838, v. p. 380.Var. *D. discrepans*, *Newm., l. c.* p. 381.

Atrum; thoracis lateribus elytrorumque basi et fasciâ medianâ flavis. Long. 6-8 lin.

*Hab.* North America.

Thorax one third broader than long, yellow, with a rather broad black stripe in the middle; the posterior angles acute, but not much diverging. Elytra yellow, with the apical third black, and with a black band at one third from the base; each elytron has four costæ, the interstices with rather close transverse costæ. The middle of the sternum frequently yellow.

*Variety*.—The variety named *discrepans* by Newman differs from the above in having the black of the fascia ascending at the suture and surrounding the scutellum. The posterior angles of the thorax in the type specimen are slightly diverging.

### **Calopteron dorsale.**

(Plate VI. fig. 2.)

*Digrapha dorsalis*, Newm., *Entom. Mag.*, 1838, v. p. 381.

Nigrum; thorace lateribus flavis; elytris nervis quatuor elevatis, interstitiis reticulatis, flavis, fasciâ ante medium ad marginem abbreviatâ apicemque late cyaneo-nigris. Long.  $5\frac{1}{2}$  lin.

*Hab.* East Florida.

The yellow at the sides of the thorax varies; in the type specimen it is very narrow, but in another it is broad. The elytra are slightly gibbous at the anterior fascia, and distinctly so in the apical region.

### **Calopteron divisum.**

(Plate VI. fig. 3.)

*Digrapha divisa*, Newm., *Entom. Mag.*, 1838, v. p. 381.

Nigrum; thorace lateribus elytrisque flavis, his apice late cyaneo-nigris. Long. 5–9 lin.

*Hab.* North America.

Very close to *C. dorsale*; but besides the absence of the anterior fascia of the elytra, it differs in having the elytra rather less widened in the apical region, and less undulating above. The thorax has generally the sides broadly margined with yellow, but in some specimens it is almost entirely black.

With regard to the three foregoing species, *C. typicum*, *C. dorsale*, and *C. divisum*, it must be observed that the synonymy given in Dr. Le Conte's 'List of Coleoptera of N. America,' and followed in Gemminger and Harold's Catalogue of Coleoptera, is evidently incorrect.

*C. apicale*, Le C., is placed as a variety of *typicum*; and in the footnote Dr. Le Conte states that "from some clerical error in the description, *divisa*, Newman, is irreccognizable, but is probably the same as *apicalis*, Le C." The clerical error alluded to is that Newman wrote "elytra basi nigro." instead of "*apice nigro*." It is

possible that *divisum* may be a variety of *dorsale*, but it is certainly not a variety of *typicum*.

Secondly. *C. dorsale*, Newm., is placed as a variety of *reticulatum*, Fabr. (Syst. Ent., p. 203). The description of this latter does not, however, accord with *dorsale*. The expressions "Statuta P. [Pyrochroa] bicoloris, at duplo major," "Elytra plana," "sterno flavo," are better applied to *typicum* than to *dorsale*.

### CÆNIA.

Newm., *Entom. Mag.*, 1838, v. p. 381.

The species of this genus have the elytra ample, each with nine costæ, the second, fourth, and eighth much more elevated than the others; the interstices are divided into quadrangular spaces by transverse nervures.

#### Cænia scapularis.

(Plate VI. fig. 6.)

Newm., *Entom. Mag.*, 1838, v. p. 381.

Nigra, obscura; elytris postice dilatatis, singulis novemcostatis, interstitiis transversim reticulatis, humeris fulvis.

Long.  $3\frac{2}{3}$ — $5\frac{1}{2}$  lin.

*Hab.* North America.

Antennæ strongly dentate. Thorax rather broad, the posterior angles very acute and diverging, the anterior angles sometimes pitchy yellow. Elytra each with nine fine costæ, the second, fourth, and eighth more elevated, the interstices divided into square spaces by transverse nervures; the shoulders more or less dull yellow.

The type specimen is very small, and has the thorax entirely black.

### CELETES.

Newm., *Entom. Mag.*, 1838, v. p. 381.

This genus is distinguished from *Calopteron* by the antennæ of the males having the branches arising from the base of the joints. The elytra have each four costæ, the interstices with transverse nervures.

#### Celetes basalis.

(Plate VI. fig. 4.)

Celetes basalis, *Le Conte, Journ. Acad. Nat. Sci. Philad.*, ser. 2, i. p. 76.

Celetes marginellus (Fabr.), *Newman, Entom. Mag.*, 1838, v. p. 381.

Atra; thoracis lateribus humerisque fulvis, illo carinato, apice producto, angulis posticis valde productis; elytris nervis quatuor elevatis, interstitiis transversim reticulatis.

Long. 3-4 lin.

*Hab.* North America.

Black, or slightly fuscous. Elytra only slightly wider at the apex; each elytron with four costæ, the interstices divided into square or slightly transverse spaces by transverse nervures. The fourth to tenth joints of the antennæ in the male emit from the base a somewhat long, slender, compressed branch. The female has the antennæ strongly dentate, and the thorax is strongly constricted in the middle, which causes the posterior angles to appear much more diverging.

### EURRHACUS.

Rostrum none. Apical joint of the maxillary palpi elongate, cultriform. Antennæ long, the third to tenth joints each with a long, compressed branch springing from the base of the joint. Thorax with a mesial carina, which is doubled in the middle. Elytra pubescent, parallel; each elytron with nine costæ, only four distinct, the interstices with a single line of punctures.

The cultriform apical joint of the palpi and the flabellate antennæ at once separate this from *Empectus*, after which it should be placed.

#### *Eurrhacus tristis*.

(Plate VI. fig. 5.)

*Lycus* (gen. 14) *tristis*, *Waterh., Trans. Ent. Soc.*, 1878, pp. 99, 106.

Niger, depressus, opacus, subtiliter pubescens; antennarum articulis duobus apicalibus flavis; thorace flavo, vittâ medianâ nigrâ, antice rotundato, angulis posticis acutis; elytris subparallelis, flavis, suturâ usque ad medium apiceque nigris. Long. 5 lin.

*Hab.* Cuenca, Ecuador.

Dull black, the base of the palpi and base of the legs testaceous. Thorax with the margins finely reflexed, the disk with a mesial carina which divides and encloses a narrow elongate arcole in the middle, and then again becomes a single carina just before the posterior margin. Each elytron has nine costæ, the second, fourth, sixth, and eighth only distinct, the others are very fine; the punctures in the lines are rather small, slightly transverse.

### LYPONIA.

*Waterh., Trans. Ent. Soc.*, 1878, p. 99.

Rostrum none. Teguments thin. Antennæ with long stout branches to the joints. Thorax subquadrate, with a mesial impressed line on the disk. Each elytron has nine costæ, the alternate ones more conspicuous, the first, second, and third not reaching the apex, the fifth and seventh joining the sixth some distance from the apex; the interstices with transverse nervures.



**Lyponia debilis.**

(Plate VI. fig. 9.)

*Waterh., Trans. Ent. Soc., 1878, p. 107.*

Rubro-fusca; thorace limbo elytrisq. rufis, antennis fere nigris, scutello picco; elytris quadricostatis, interstitiis biserialiter fortiter punctatis, punctis transversis, seriebus costâ tenui divis. Long.  $4\frac{2}{3}$  lin.

*Hab. China (J. C. Bowring, Esq.).*

Thorax rather flat on the disk, with a mesial fine impressed line (not extending to the anterior nor posterior margins), the sides gently reflexed. Elytra with the fourth, sixth, and eighth costæ extending to the apex, by which means the first, second, and third are somewhat abbreviated; the fifth and seventh costæ join the sixth some distance from the apex, the ninth is only visible at the shoulder when viewed laterally; the interstices have each a single line of strong, transverse punctures. The texture of the elytra is delicate, and is semitransparent where the punctures are. The third joint of the antennæ has only a short branch, but the branches to the following joints gradually increase in length, are slender and lamelliform.

**PLATEROS.***Bourgeois, Comptes-rendus d. l. Soc. Ent. Belg., 1879.**Lycus, genus 18, Waterh., Trans. Ent. Soc., 1878, p. 100.*

Rostrum none. Antennæ slender and simple in both sexes. Thorax even above, with only a slight longitudinal mesial impression behind. Elytra with nine costæ, the interstices with a single line of punctures.

In my original manuscript the genus *Plateros* was intended only to include *Eros lictor*, Newm., and other American species; a more detailed examination of the species, however, has induced me to include in it the Asiatic forms separated originally under the head of "Genus 16" (Tr. Ent. Soc., 1878, p. 99), of which *gracilis* was the type.

## AMERICAN SPECIES.

**Plateros lictor.**

(Plate VIII. fig. 5.)

*Eros lictor, Newm., Entom. Mag., 1838, v. p. 382.*

Niger; thoracis lateribus flavis, elytris novemcostatis; interstitiis uniserialiter punctatis. ♂. Long.  $3\frac{1}{2}$  lin.

*Hab. North America.*

Antennæ not less than half the length of the entire insect, the third joint at its apex nearly as broad as its length, the fourth joint the same width at the apex but a trifle longer, the following joints

very gradually becoming narrower and a trifle longer. Thorax shining black, with the sides yellow. Elytra subparallel, the alternate costæ very slightly more elevated than the others; the interstices with a single line of rather strong punctures.

### **Plateros alatus.**

(Plate VIII. fig. 4.)

*Eros alatus*, Newman, *Entom. Mag.*, 1838, v. p. 382.

Niger; thoracis limbo flavo, elytris novemcostatis, interstitiis uniseriatim punctatis, humeris anguste rufo-flavis. ♀.

Long.  $3\frac{1}{2}$  lin.

*Hab.* North America.

Antennæ relatively shorter than in the preceding; the third joint at its apex a little broader than its length, narrowed towards the base; the fourth joint nearly as long as the second and third taken together, but not wider than the second, narrowed at the basal half; the following joints very gradually becoming narrower and a trifle longer. Thorax not quite so short as in *lictor*, more rounded in front, the posterior angles a little less diverging. Elytra relatively a trifle less long, the shoulders margined with dark reddish yellow. The coxæ and the extreme base of the femora yellowish.

The species of this group are very variable, and it is difficult to arrive at any definite conclusion as to the identity of the species described by Newman with those of other authors. I think, however, that there is little doubt that *alatus*, N., is the female of *lictor*, N., corresponding respectively to *timidus*, LeC., and *æger*, LeC., which, according to Dr. Le Conte himself, are synonymous with *modestus* of Say (Bost. Journ., i. p. 153). See Le Conte, Journ. Ac. Phil. ser. 2, i. p. 89, and List of the Coleopt. of N. Amer. p. 51. The reference in Gemminger and v. Harold's 'Catalogue of Coleoptera,' p. 1634, which assigns *alatus* to *crenatus*, Germ., is incorrect, as it is also in the journal above quoted, at p. 79.

### ASIATIC SPECIES.

### **Plateros dispellens.**

(Plate VI. fig. 8.)

*Lycus dispellens*, Walker, *Ann. & Mag. N. Hist.*, 1858, ii. p. 282.

Niger, nitidus, parce pubescens, parallelus, depressus; thorace nitido, lævi: elytris flavis, apice nigris, punctato-striatis, interstitiis angustis costiformibus. ♂, ♀.

Long.  $2\frac{1}{2}$ – $3\frac{1}{2}$  lin.

*Hab.* Ceylon (Dr. Templeton, Dr. Thwaites), South India (M. J. Walkhouse, Esq.).

Eyes rather large. Thorax with the margins reflexed; above with an ill-defined ridge on each side extending from the side (rather behind the middle) to the middle of the base. Elytra rather

strongly punctate-striate, the intervals all equal and somewhat costiform; the apex is more or less black.

I believe that the species described by me as *Lycus* (gen. 16) *gracilis* (Trans. Ent. Soc. 1878, pp. 99 & 107) is only a variety of the above, having the elytra entirely yellow.

### **Plateros planatus.**

(Plate VII. fig. 1.)

Piceo-niger, nitidus, pubescens; thorace flavo, disco utrinque infuscato; elytris crebre striato-punctatis, interstitiis angustis. ♂, ♀. Long.  $2\frac{3}{4}$ – $3\frac{1}{2}$  lin.

*Hab.* Shanghai (*Fortune*), Penang (*Cantor*).

Antennæ a little stouter than in the preceding species, broadest at the middle, tapering towards the apex; the third to sixth joints are a little more dentate in the male than in the female. Thorax shining, the sides gently reflexed, the front margin with a few punctures. Scutellum yellow. Elytra rather strongly and closely punctate-striate, the intervals very narrow, nearly equal, the fourth a little more elevated at the base. The inside of the base of the femora yellowish.

This species is very close to the preceding, but (besides the difference of coloration) it differs in having the sides of the thorax less reflexed, and the posterior angles are more rectangles.

### **Plateros languidus.**

(Plate VII. fig. 2.)

Obscure fuscus, pubescens, parallelus, depressus; capite flavo; thorace flavo, depresso, marginibus incrassatis vix reflexis, disco foveolis quinque parvis impresso; elytris crebre evidenter punctato-striatis, interstitiis angustis, alternatim parum elevatis. ♂. Long. 3 lin.

*Hab.* Ceylon (*Nietner*).

Head slightly impressed between the eyes. Thorax flat, impressed within the margins, with four small round foveæ on the disk and an elongate mesial one behind. Scutellum yellow. Elytra subparallel, a trifle wider at the apex, distinctly and closely punctate-striate; the interstices very narrow, the alternate ones a little more distinct.

### **Plateros fuscipennis.**

(Plate VII. fig. 3.)

Elongatus, parallelus, fuscus; thorace sordide flavo, nitido, medio paulo infuscato; elytris evidenter crebre punctato-striatis, interstitiis angustissimis costiformibus. ♂. ♀. Long.  $2\frac{1}{3}$ – $3\frac{1}{4}$  lin.

*Hab.* Sylhet (*J. C. Bouring, Esq.*).

Dark fuscous, rather dull, except the thorax, very parallel, depressed. Antennæ slender, scarcely at all dentate. Thorax reflexed at the sides, deeply impressed on each side of the disk, with a slight longitudinal impression in the middle of the hind margin. Elytra parallel, rather strongly and very closely punctate-striate, the interstices very narrow and very nearly equal; the shoulders are tinted with dull yellow.

In the Museum collection there is a single specimen from India, in bad condition, of a species closely allied to the preceding. It differs in having the antennæ decidedly more dentate and not quite so long, and the thorax is not so much impressed on the sides of the disk: the punctate striae of the elytra are not quite so strong. It is a male, and measures  $2\frac{1}{4}$  lines.

### **Plateros expletus.**

(Plate VII. fig. 4.)

Fuscus, pubescens; ore, thorace, elytris femorumque basi sordide flavis; thorace nitido, margine antico rugoso-punctato; elytris crebre, sat fortiter punctato-striatis, interstitiis angustissimis, vix conspicuis. ♂. Long.  $2\frac{1}{3}$  lin.

*Hab.* Borneo, Sarawak (*Wallace*).

Antennæ fuscous, rather long and slender, scarcely dentate; the apical joint a little paler; the third joint as long as the fourth. Eyes very large, black. Thorax impressed on each side of the disk, the anterior margin rather strongly (but obscurely) punctured. Scutellum yellow. Elytra closely punctate-striate; the interstices very narrow, only distinct at the base, lost among the punctuation at the apex, the extreme apical margin dusky. Coxæ and the base of the anterior and intermediate femora yellowish.

### **Plateros carbonarius.**

(Plate VII. fig. 5.)

Nigro-fuscus, parce pubescens, subparallelus; thorace flavo, medio fusco, nitido; elytris sat fortiter punctato-striatis, interstitiis angustissimis, subæqualibus. ♂. Long. 3 lin.

*Hab.* India?

Very close to *P. fuscipennis*, from which it differs in being more elongate; the thorax is relatively a little longer and nearly parallel at the sides, not so deeply impressed on each side of the disk, and the fuscous disk is more distinct, only leaving the borders yellow; the punctuation of the elytra is also more rugose and less regular; there is no trace of yellow on the shoulders.

**Plateros chinensis.**

(Plate VI. fig. 7.)

Nigro-fuscus, parce pubescens; subparallelus; thorace nitido, lateribus rufo-flavis; elytris sat fortiter punctato-striatis, interstitiis angustissimis, fere æqualibus, postice oblitteratis. ♂, ♀.

Long. 3 lin.

*Hab.* Hong Kong (*J. C. Bowring, Esq.*).

Very close to *P. fuscipennis*, but relatively a little broader, and the antennæ are shorter and rather stouter. The thorax is broad, a little narrowed in front, fuscous; the disk is moderately impressed on each side at the base. The elytra are rather roughly and very closely punctate-striate, the intervals very narrow, interrupted by the punctuation towards the apex. The anterior coxæ are pale.

The female has the antennæ a trifle shorter and stouter than the male.

**DIHAMMATUS.**

Antennæ slender, scarcely dentate, the second and third joints nearly equal. Thorax simple, with a short longitudinal mesial channel behind. Elytra with ten punctate striæ; the interstices very narrow, nearly equal, costiform.

Differs from the preceding genus in having the third joint of the antennæ small.

**Dihammatus cribripennis.**

(Plate VII. fig. 6.)

Pallide fuscus; capite, thorace elytrorumque humeris sordide flavis; elytris crebre punctato-striatis. ♂.

Long. 2 lin.

*Hab.* Java (*J. C. Bowring, Esq.*).

Parallel, depressed. Antennæ rather long and slender, the third joint scarcely longer than the second. Thorax rather deeply impressed on each side of the disk, with a longitudinal mesial channel extending from the base to a little before the middle; the anterior margin obscurely punctured. Elytra closely and distinctly punctate-striate; the interstices very narrow, subcostiform, nearly equal, the alternate ones a little more distinct at the base. Coxæ and base of the femora obscure yellow.

**Dihammatus pallens.**

(Plate VII. fig. 7.)

Parallelus, depressus, sordide flavus, pubescens; antennis, elytris abdomineque fusciscentibus; elytris crebre subtilius punctato-striatis, interstitiis angustissimis.

Long. 2 lin.

*Hab.* Sarawak (*Wallace*).

Closely resembles the preceding, but has the elytra more finely sculptured &c. Antennæ fuscous; the first and second joints yellow, the third joint scarcely larger than the second. Thorax pale yellow, with two impressions on each side within the lateral margins; the mesial posterior channel fine, the anterior margin obscurely punctured. Elytra pale fuscous, with a tinge of yellow around the base, closely and more finely punctate-striate than in the preceding species; the interstices extremely narrow, the second and fourth a little more distinct at the base. Abdomen fuscous. Part of the femora, the tibiæ, and tarsi slightly fuscous.

This species must not be confounded with *Plateros expletus* above described, which it closely resembles. The small third joint of the antennæ at once separates it.

### MELAMPYRUS.

Rostrum none. Antennæ serrate, moderately broad. Thorax even above, with a mesial longitudinal impression behind. Elytra with nine costæ, the alternate ones more elevated. Thorax and elytra pubescent.

This genus is proposed for two species which differ from *Plateros* chiefly in being more pubescent and in having the antennæ broader. From *Ditoneces* they differ in having the alternate costæ of the elytra more elevated.

#### *Melampyrus alternans.*

(Plate VIII. fig. 7.)

*Lycus* (gen. 19) *alternans*, *Waterh., Trans. Ent. Soc.*, 1878, pp. 100 & 108.

Ater; antennis latis, dentatis; thorace antice omnino rotundato, medio postice longitudinaliter impresso, angulis posticis acutiusculis; elytris dimidio basali ferrugineo, novemcostatis, costis alternatis elevatis, interstitiis uniseriatim punctatis. ♀. Long.  $4\frac{1}{2}$  lin.

*Hab.* Sarawak (*Wallace*).

Having only the female of this species, its position is a little doubtful; its appearance is rather different from that of the species of *Ditoneces*, owing chiefly to the elevated alternate costæ of the elytra; but if the male should be found to have pectinate antennæ, it may have to be associated with that genus.

#### *Melampyrus misellus.*

(Plate VIII. fig. 6.)

*Lycus* (gen. 19) *misellus*, *C. Waterh., Trans. Ent. Soc.*, 1878, pp. 100 & 108.

Nigro-fuscus, pubescens; thorace, scutello elytrisq. rufis; antennarum articulo apicali ferrugineo; thorace medio longitudinaliter

canaliculato; elytris novemcostatis, costis alternatis elevatis, interstitiis uniseriatim punctatis. ♀. Long. 3 lin.

*Hab.* Penang (*J. C. Bowring, Esq.*).

The remark appended to the foregoing species applies also to this. The colour of the thorax and elytra is a somewhat pale rusty red; the extreme apex of the elytra is a little dusky.

### DITONECES.

Rostrum none. Antennæ of the male with a slender pubescent branch emitted from the third to tenth joints. Thorax even above, with a very short longitudinal impression behind. Elytra pubescent, with nine nearly equal costæ, the interstices each with a single line of punctures.

The females differ from the males in having the antennæ only strongly dentate.

The species known at present are all eastern.

#### *Ditoneces punctipennis.*

(Plate VII. fig. 10.)

*Lycus* (gen. 17) *punctipennis*, *C. Waterh., Trans. Ent. Soc.*, 1878, pp. 100 and 103.

Nigro-piceus, supra subtiliter pubescens; fronto flavâ; thorace scutelloquo rufo-flavo; elytris parallelis, rufo-flavis, sat fortiter crebre striato-punctatis, interstitiis angustissimis, alternis parum magis elevatis; ore coxisque testaceis. ♂, ♀. Long.  $3\frac{3}{4}$  lin.

*Hab.* Java (*J. C. Bowring, Esq.*).

The punctuation of the striæ of the elytra is rather strong; the alternate interstices are very slightly more elevated at the base than the others.

The female has the antennæ shorter than those of the male and strongly dentate; the middle of the thorax and the scutellum are fuscous.

#### *Ditoneces rufescens.*

(Plate VII. fig. 8.)

Parallelus, depressus, pubescens, nigro-piceus; capite, thorace, scutello elytrisque rufo-flavis; thorace longitudine haud latiori; elytris sat fortiter punctato-striatis, interstitiis angustissimis. ♂.

Long. 4 lin.

*Hab.* Java (*J. C. Bowring, Esq.*).

This species differs from the preceding in having the thorax rather longer and in having the branches emitted from the antennal joints shorter, the branch of the sixth joint being about half the length of the joint, whereas in *D. punctipennis* it is rather longer than the joint.

**Ditoneces propinquus.**

(Plate VII. fig. 11.)

Piceo-fuscus, pubescens, depressus, parallelus; thorace nitido, sordide flavo, disco infusato; elytris sordide flavis, crebre sat fortiter punctato-striatis, interstitiis angustissimis. ♂. Long.  $3\frac{1}{4}$  lin.

*Hab.* China (*J. C. Bowring, Esq.*).

Very near the preceding, but of a sordid yellow colour above; the thorax a little narrowed in front and completely rounded anteriorly, the disk dusky, moderately impressed on each side. The antennæ are nearly as in *D. rufescens*, but the joints are a little shorter. Elytra strongly punctate-striate; the interstices extremely narrow, the alternate ones a little more distinct and more elevated, especially the fourth and sixth.

**Ditoneces sobrinus.**

(Plate VIII. fig. 2.)

Nigro-fuscus, parallelus, pubescens; thorace flavo-rufo; elytris flavo-rufis, striatis, striis obsoletius punctatis, interstitiis angustis, fere æqualibus. ♂. Long.  $2\frac{3}{4}$  lin.

*Hab.* Burmah (*J. C. Bowring, Esq.*).

Differs from the three preceding species in having the punctuation of the striæ of the elytra less strong and more obscure, the interstices being a little less narrow, and all equal except the eighth, which is a little more elevated. The antennæ have the branches to the sixth and seventh joints about as long as the joints. The usual short channel in the middle at the base of the thorax is scarcely noticeable.

**Ditoneces pubicornis.**

(Plate VII. fig. 9.)

*Lycus pubicornis*, *Walker, Ann. & Mag. N. Hist.*, 1858, ii. p. 281, ♂.

*Lycus melanopterus*, *Walker, l. c.* p. 281, ♀.

*Lycus duplex*, *Walker, l. c.* p. 281, ♀.

*Lycus revocans*, *Walker, l. c.* p. 282, ♂.

Niger, pubescens; thorace, scutello elytrisq. rufis, his triente apicali atro. ♂, ♀. Long.  $3-4\frac{1}{2}$  lin.

*Hab.* Ceylon (*Dr. Thwaites*).

This species is densely pubescent above. The punctures in the striæ of the elytra are rather large and close, but are much obscured by the pubescence; the interstices are extremely narrow and all equal. The male has very long branches to the antennal joints, at least three or four times the length of the joints. The female has the antennæ very strongly dentate.

The type specimens to which Mr. Walker gave the above-mentioned names clearly belong to one species; his *revocans* is a small



male. The specimen named *duplex* is a little narrower than the other female examples, but is clearly the same species; the alternate interstices of the elytra are a little more distinct than the others.

### *Ditoneces pubipennis*.

(Plate VIII. fig. 1.)

*Lycus pubipennis*, Walker, *Ann. & Mag. N. Hist.*, 1859, iii. p. 259.

Niger, longe pubescens; thorace utrinque fortiter impresso, medio postice canaliculato; elytris rufis, punctato-striatis, interstitiis alternis subcostiformibus, alteris angustissimis, apice nigro. ♀.

Long. 3 lin.

*Hab.* Ceylon.

This species is closely allied to *D. pubicornis*, but has the thorax black and rather shining, deeply impressed on each side. The alternate interstices of the elytra are slightly costiform, the others are extremely narrow and somewhat obscured, and interrupted by the rather strong punctuation of the striæ.

*Celetes scabripennis*, Motsch. (Bull. Mosc., 1861, i. p. 137), belongs to this genus, and should come here. It is much smaller than any of the preceding ( $1\frac{3}{4}$ – $2\frac{1}{4}$  lines long), and has the elytra pale yellow, with the apex black. The thorax has a fovea in the middle at the base, and is impressed on each side. The elytra have the striæ rather more finely punctured than any of the preceding species; the alternate interstices are slightly elevated, the others are very narrow and somewhat interrupted by the punctures of the striæ.

The male has the branches of the antennal joints slender, a little longer than the joints themselves. The female has the antennæ rather strongly serrate.

The specimens in the Museum are from Ceylon.

### *Ditoneces terminalis*.

(Plate VIII. fig. 3.)

Niger, parum nitidus, subtilius pubescens; thorace utrinque fortiter impresso, medio postice canaliculato; elytris crebre punctato-striatis, interstitiis angustis æqualibus, flavis, apice nigro. ♀.

Long.  $2\frac{1}{2}$  lin.

*Hab.* Ceylon.

Very close to *D. scabripennis*, Mots., but the antennæ, compared with the female, appear rather more dentate, the thorax is straighter at the sides, and the punctuation of the striæ of the elytra is rather stronger and the interstices are all equal.

### DITUA.

Rostrum none. Antennæ broad, serrate. Thorax broad, a little more than a semicircle, the margins not incrassate, with a discoidal

lanceolate areolet, from the lateral angle of which proceeds an oblique carina, which is scarcely noticeable. Elytra with nine regular nearly equal costæ; the interstices with a single line of punctures. Legs rather short. Thorax, elytra, and legs having a woolly appearance.

The form of the thorax and the presence of a mesial areolet separate this from the foregoing genera.

### **Ditua deplanata.**

(Plate VIII. fig. 8.)

*Lycus* (gen. 20) *deplanatus*, *Waterh., Trans. Ent. Soc.*, 1878, pp. 100 and 109.

Atra, depressa, brevissime pubescens; antennis crassis, dentatis, flavis; thorace supra antice ruguloso, medio areolâ lanceolatâ instructo; elytris parallelis, flavis, apice nigro, novemcostatis, interstitiis regulariter uniseriatim punctatis; pedibus sat brevibus, fuscis, tibiârum basi et apice unguiculisque flavis. ♂. Long. 4 lin.

*Hab.* New Guinea, Dorey (*Wallace*).

The basal joint of the antennæ is dusky. The thorax besides the mesial areolet has an indication of a raised line on each side from the middle of the areolet not quite reaching the sides of the thorax.

### **BULENIDES.**

Rostrum none. Antennæ broad, dentate. Thorax with the margins incrassate, with a distinct discoidal areolet, united to the anterior margin by a carina. Elytra with four distinct costæ; the interstices with two lines of punctures divided by a fine costa.

Differs from the preceding genus in having the margins of the thorax more or less reflexed and incrassate, and in the costæ of the elytra being unequal.

This genus was originally proposed for *Lycus obsoletus*, but three others are now associated with it.

### **Bulenides obsoletus.**

(Plate IX. fig. 1.)

*Lycus* (gen. 21) *obsoletus*, *Waterh., Trans. Ent. Soc.*, 1878, pp. 100 and 109.

Fuscus; thorace medio areolâ lanceolatâ, angulis posticis acutis; elytris dimidio basali pallide fusco, apice fere nigro, quadricostatis, interstitiis biseriatis evidenter punctatis, seriebus costâ tenui divis. ♂. Long.  $3\frac{1}{4}$ – $4\frac{1}{4}$  lin.

*Hab.* Java (*J. C. Bowering, Esq.*), Sumatra (*Buxton*).

The extent of the darker apical portion of the elytra varies, but it occupies at least half of the elytra.

**Bulenides pauper.**

(Plate IX. fig. 2.)

Fuscus, opacus; thorace ferrugineo-flavo, subtiliter pubescente, antice omnino rotundato, medio carinâ distinctâ postice duplicatâ; elytris basi ferrugineo-flavis, quadricostatis, sat fortiter biserialim punctato-striatis, seriebus carinâ tenui divis. ♂. Long.  $4\frac{1}{4}$  lin.

*Hab.* Sumatra.

A rather dull, broad species. The antennæ are robust and strongly dentate. Thorax transverse, broadest at the posterior angles (which are acute), impressed on each side; the mesial carina is doubled rather behind the middle. Elytra at the base not broader than the thorax, rather wider towards the apex; the extreme base and the four strong costæ for half their length rusty yellow, rather strongly punctate-striate in double lines, the lines divided by a very fine costa.

**Bulenides turbidus.**

(Plate IX. fig. 4.)

Nigro-fuscus, opacus; thorace rufo-ochraceo, crebre punctato, medio carinâ distinctâ postice duplicatâ, disco utrinque infusato; elytris quadricostatis, interstitiis biserialim fortiter punctatis, seriebus lineâ tenui divis. ♀. Long.  $5\frac{1}{2}$  lin.

*Hab.* Sumatra.

Rather more elongate than *B. pauper*, the thorax less transverse and less rounded in front. Thorax with the margins broadly reflexed and rather thickly punctured; the mesial carina is very distinct, divided posteriorly into two parallel carinæ. Elytra each with four strong costæ, the interstices with two rows of strong (slightly transverse) punctures, the rows divided by a fine line which is scarcely raised.

**Bulenides dubius.**

(Plate IX. fig. 5.)

Fuscus, parum nitidus; thorace fusco-testaceo, lateribus parum reflexis, disco utrinque fortiter impresso, antice carinâ brevi, medio areolâ lanceolatâ; elytris basi plus minusve fusco-flavis, quadricostatis, interstitiis biserialim punctatis, seriebus basi costâ tenui divis. Long. 3 lin.

*Hab.* Borneo.

Thorax obscure testaceous, rather dusky at the base; the carina is scarcely perceptible in front, and is divided posteriorly into two. Elytra parallel, fuscous, paler at the base; each elytron with four distinct costæ, which turn slightly away from the scutellum near the base; the interstices with two lines of moderately strong punctures, the

lines divided at the base by a very fine carina; the outer line of punctures has a tendency to encroach on the inner line, and towards the apex the lines are somewhat confused.

It is doubtful to which sex the specimen described belongs.

### CAUTIRES.

Rostrum none. Antennæ of the male with a long compressed branch proceeding from the base of the third to tenth joints; very strongly dentate in the female. Thorax with seven areolet, the two lateral ones sometimes obsoletely divided. Elytra as in *Bulenides*.

The males of this genus are easily known by the branches of the antennal joints arising from the base of the joints. The females have the antennæ very acutely dentate.

#### Cautires excellens.

(Plate VIII. fig. 9, & Plate IX. fig. 3.)

*Lycus* (gen. 22) *excellens*, *Waterh., Trans. Ent. Soc.*, 1878, pp. 101, 110.

Ater, opacus; thorace septemareolato; elytris dimidio basali pallide fusco, quadricostatis, interstitiis biseriatis evidenter punctatis, punctis nigris. ♂, ♀. Long.  $3\frac{1}{2}$  lin.

*Hab.* Sarawak (*Wallace*).

The lateral areolet of the thorax are sometimes not very distinctly divided, but the ridge separating them is generally well marked. The elytra have each four costæ, the interstices with two rows of black punctures, the rows divided by a fine line, not by a distinct costa.

#### Cautires excellens, var.

♀. This variety (as it seems best to consider it for the present) differs from the female of *C. excellens* from Borneo in being rather smaller, in having the base of the elytra more red, but especially in having the joints of the antennæ differently formed; the branches arise from the base of the joints, and not from the apex, being thus somewhat intermediate in form between the male and female of the Bornean examples.

*Hab.* Sumatra (*Buxton*).

#### Cautires congener.

(Plate IX. fig. 7.)

Fuscus, subopacus; thorace ochraceo; elytris basi ochraceis, quadricostatis, interstitiis biseriatis sat fortiter punctatis. ♂, ♀.

Long. 3-5 lin.

*Hab.* Java (*J. C. Bowring, Esq.*).

♂. Thorax obscure ochraceous, with seven areolets, the ridge dividing the two lateral ones not very distinct. Elytra very little enlarged towards the apex, obscure ochraceous at the base; each elytron with four well-marked costæ, the interstices with two rows of rather strong and distinct punctures, the rows divided by a fine (but scarcely elevated) line.

♀. Larger than the male ( $4\frac{1}{4}$ –5 lin.), the thorax and elytra of a clearer yellow. It somewhat resembles *Metriorrhynchus astutus*; but the discoidal areolet of the thorax is narrow, elongate lanceolate, and the elytra have scarcely any pubescence.

### EROS.

*Newman, Entom. Mag.*, 1838, v. p. 382.

#### *Eros præfectus.*

(Plate IX. fig. 6.)

*Newman, Entom. Mag.*, 1838, v. p. 382.

Fusco-niger; elytris septemcostatis, costis alternatis bene elevatis, interstitiis uniseriatim reticulato-punctatis, humeris flavo-rufis. ♂.

Long.  $3\frac{2}{3}$  lin.

*Hub.* North America.

Second joint of the antennæ small, but distinct, the third joint of the same form, but one third larger; the fourth as long as the two preceding taken together, and (at its apex) a little thicker; the following joints of the same form as the fourth, but becoming more slender. Thorax somewhat transverse, rather strongly constricted before the posterior angles, which strongly diverge and are acute; the mesial areolet is very broad, it nearly extends to the anterior and posterior margins, and is connected at the sides by an oblique carina on each side. The elytra have a reddish-yellow spot on the humeral angle; each elytron has seven costæ, the second, fourth, and sixth much stronger than the others; the intervals have well defined transverse nervures which divide the surface into squares or only slightly transverse spaces.

### EROTIDES.

Rostrum none; forehead produced into a process between the antennæ. Antennæ simple; the second joint small, but distinct. Thorax trapezoidal, with seven areolets as in *Platycis minutus*. Elytra parallel; each elytron with four strong costæ; the interstices with transverse costæ, which are placed somewhat close together, frequently oblique, or divided so as to form the letter Y placed horizontally <.

The type of this genus is *Eros oblitus*, Newman. It approaches most nearly to *Platycis*, but the sculpture of the elytra is quite

different. The European *Eros cosnardi*, Chev., must be associated with it.

### **Erotides oblitus.**

(Plate IX. fig. 9.)

*Eros oblitus*, Newm., *Entom. Mag.*, 1838, v. p. 382.

Niger, subopacus; fronte inter antennis productâ; thoracis lateribus fulvis; elytris singulis quadricostatis, interstitiis costulis numerosis irregularibus instructis. ♂, ♀. Long. 3-3½ lin.

*Hab.* North America.

Forehead produced between the antennæ into a flattened process, which is slightly concave above, truncate in front; it is a little broader in the female than in the male. Thorax rather broader than long, with the sides reflexed; the surface is divided into seven areolets, the discoidal ones shallow, the lateral ones deep; the three anterior carinæ are parallel, the outer ones of these three are continued posteriorly and curved somewhat in the form of reversed brackets ), so as to enclose the posterior mesial areolet, which is closed posteriorly by the base of the thorax. The elytra are subparallel, each with four very well-marked shining costæ; the interstices have numerous rather less elevated transverse shining ridges, which are either straight, oblique, or divided into two halfways across the interstice.

### **XYLOBANUS.**

Rostrum none. Antennæ dentate. Thorax with five or seven areolets, the lateral ones sometimes obliterated. Elytra each with four costæ, the interstices with regular transverse costæ.

The type of this genus is *Lycus costifer*, Walker.

### **Xylobanus costifer.**

(Plate IX. fig. 10.)

*Lycus costifer*, Walker, *Ann. & Mag. N. Hist.*, 1858, ii. p. 282.

Fusco-niger, subopacus; capite piceo; thorace ochraceo, quinque-areolato; elytris ochraceis, quadricostatis, interstitiis uniseriatim fortiter foveatis, foveis quadratis. ♂. Long. 3 lin.

*Hab.* Ceylon (*Dr. Templeton*).

Head pitchy, shining, with four shallow foveæ between the eyes. Thorax with the sides moderately reflexed. Elytra parallel; each elytron with four strong costæ; the interstices with numerous transverse costæ dividing the surface into quadrangular, generally square spaces.

**Xylobanus humerifer.**

(Plate IX. fig. 8.)

*Lycus humerifer*, *Walker, Ann. & Mag. N. Hist.*, 1859, iii. p. 258.

Fusco-niger, subopacus; thorace medio constricto, quinqueareolato, lateribus fortiter reflexis; elytris thorace paulo latioribus, parallelis, quadricostatis, interstitiis uniseriatim fortiter foveatis, basi flava. ♂. Long.  $2\frac{3}{4}$  lin.

*Hab.* Ceylon (*Dr. Templeton* and *Dr. Thwaites*).

Thorax constricted in the middle, reflexed at the sides. Elytra parallel, a trifle broader than the thorax, nearly the basal third yellow; each elytron with four strong costæ; interstices with finer transverse costæ dividing the surface into quadrangular, generally square spaces.

**Xylobanus gratiosus.**

(Plate IX. fig. 11.)

Elongatus, parallelus, opacus, nigro-fuscus; thorace areolato, rufo-ochraceo, medio constricto; elytris rufo-ochraceis, parallelis, quadricostatis, interstitiis uniseriatim foveatis. ♂, ♀.

Long.  $3\frac{1}{2}$ –5 lin.*Hab.* Andaman Islands.

Head pitchy ochraceous. Thorax, scutellum, and elytra reddish ochraceous. Thorax with five areolets, deeply and angularly constricted in the middle, the sides strongly reflexed. Elytra long, parallel; the four costæ on each elytron are very distinct; the interstices with numerous transverse costæ which divide the surface into transverse quadrate spaces. Legs more or less pitchy. The female is much longer than the male, and the thorax is a little less strongly constricted in the middle.

**Xylobanus fastidiosus.**

(Plate X. fig. 3.)

Fuscus, fere parallelus; capite piceo; thorace testaceo-ochraceo, septemareolato, scutello elytrisq. ochraceis, his quadricostatis, interstitiis uniseriatim foveatis. ♂, ♀.

Long.  $4$ – $5\frac{1}{2}$  lin.*Hab.* Java (*J. C. Bowring, Esq.*).

Thorax finely rugulose-punctate in front, obscure yellowish testaceous, the seven areolets distinct. Elytra long and parallel, rusty yellow; the four costæ are well marked; the interstices with numerous transverse costæ dividing the surface into transversely quadrate spaces, these transverse costæ towards the apex and in the lateral interspace are not, as a rule, further distant from each other than their own thickness.

**Xylobanus rigidus.**

(Plate X. fig. 1.)

Fuscus; thorace elytrisq. pallide ochraceis; thorace septem-areolato; elytris quadricostatis, interstitiis uniseriatim foveatis. ♂.

Long.  $4\frac{1}{2}$  lin.

*Hab.* Java (*J. C. Bowring, Esq.*).

It is perhaps doubtful whether this should be separated from the preceding. It differs, however, in having the thorax and elytra of a uniform colour, the antennæ are much more strongly dentate, the thorax does not present the same roughness in front, and the transverse costæ of the interstices of the elytra are further apart, the spaces divided by them being nearly squares, even in the lateral interstice.

**Xylobanus foveatus.**

(Plate X. fig. 2.)

This species differs from the preceding in having the thorax and elytra of a dull yellowish red. The antennæ are very strongly dentate; the thorax has the posterior angles not diverging, and the mesial posterior areolet, instead of terminating in the middle of the disk, extends much more forward.

*Hab.* India, Barrackpore? (*Sir J. Hearsay*).

**Xylobanus rubens.**

(Plate X. fig. 4.)

Fuscus; thorace, scutello elytrisq. flavo-rufis; thorace septem-areolato; elytris quadricostatis, interstitiis uniseriatim foveatis. ♀.

Long.  $5\frac{1}{2}$  lin.

*Hab.* Siam (*J. C. Bowring, Esq.*).

This species resembles *X. foveatus*, but is broader, the posterior angles of the thorax are acute, and the transverse costæ of the interstices of the elytra are twice as close together, the space between the costæ being about equal to the thickness of the costæ.

**Xylobanus humilis.**

(Plate X. fig. 5.)

Fusco-niger, opacus; thorace fusco, antice angustato, septem-areolato, margine antico subtiliter punctulato; elytris quadricostatis, interstitiis uniseriatim foveatis, dimidio basali sordide testaceo, foveis atris. ♀.

Long. 5 lin.

*Hab.* Sarawak (*Wallace*).

Thorax with the seven areolets distinct; the anterior margin rather produced in the middle. Elytra parallel, dull black; the four



costæ strong; the interstices divided into quadrangular spaces by well-marked transverse costæ, the spaces slightly transverse near the base; towards the apex the costæ are closer together.

### **Xylobanus regularis.**

(Plate X. fig. 8.)

Fuscus, depressus, opacus; thorace flavo, septemareolato, scutello flavo; elytris parallelis, depressis, quadricostatis, interstitiis regulariter fortiter foveolatis; femoribus basi fusco-flavis. ♀.

Long.  $3\frac{1}{3}$  lin.

*Hab.* Dorey, New Guinea (*Wallace*).

Thorax dull yellow, a little broader than long, rounded in front, constricted behind the middle; the costa dividing the lateral areolets not very distinct. Elytra parallel, scarcely broader than the thorax; the four costæ strong; the interstices regularly divided by well-marked transverse costæ, the spaces slightly transverse. The base of the femora and the extreme base of the tibiæ obscure yellow. Sterna reddish yellow.

### **Xylobanus privatus.**

(Plate X. fig. 6.)

Fuscus, parallelus; thorace, scutello elytrisq. ochraceis; thorace medio postice areolâ angustâ; elytris quadricostatis, interstitiis uniseriatim foveatis. ♀.

Long.  $4\frac{1}{2}$  lin.

*Hab.* Java (*J. C. Bowring, Esq.*).

This only differs from *X. fastidiosus* above described in the thorax. This is shorter and more rounded in front, and instead of having seven areolets, it has only one narrow mesial one, which is joined to the anterior margin by a carina.

It seems very probable that this may be a variety of *X. fastidiosus*.

### **Xylobanus senex.**

(Plate X. fig. 7.)

Fusco-niger, opacus; thorace fusco, medio postice areolâ angustâ, antice carinis tribus; elytris quadricostatis, interstitiis uniseriatim foveatis, dimidio basali sordide testaceo, foveis atris. ♀.

Long. 4 lin.

*Hab.* Borneo (*Wallace*).

This differs from *X. humilis* in the thorax, which is shorter and more obtuse in front, and instead of having seven areolets, has only five, the mesial posterior one being extremely narrow.

It is very probable that this may only be a variety of *X. humilis*.

**Xylobanus elusus.**

(Plate X. fig. 9.)

Ater, opacus; thorace medio areolâ lanceolatâ; elytris quadricostatis, interstitiis costis numerosis transversis approximatis. ♀.

Long.  $3\frac{1}{2}$  lin.

*Hab.* Borneo (Wallace).

A dull black species, parallel. Thorax transverse, trapeziform, not much reflexed at the sides, with an obscure areolet in the middle. Elytra with the four costæ strong; the numerous transverse costæ in the interstices are not so much elevated as the longitudinal costæ, and divide the surface into strongly transverse quadrate spaces. The first and second costæ are fuscous at the base.

**Xylobanus fumigatus.**

(Plate XI. fig. 1.)

Ater, opacus; thorace obsolete septemareolato; elytris quadricostatis, costis basi fuscis, interstitiis velutinis, costis numerosis bene approximatis. ♀.

Long.  $3\frac{1}{2}$ – $4\frac{1}{2}$  lin.

*Hab.* Borneo (Wallace).

This closely resembles *X. humilis*, but the areolets of the thorax are not so well defined; the elytra have the same four strong costæ, but the transverse costæ are black, less distinct and much closer together, and the interstices have a more woolly appearance.

**Xylobanus indutus.**

(Plate X. fig. 10.)

Ater, opacus; thorace medio areolâ lanceolatâ; elytris quadricostatis, costis basi fuscis, interstitiis velutinis, costis numerosis transversis bene approximatis. ♀.

Long.  $4\frac{1}{2}$  lin.

*Hab.* Sumatra (E. C. Buxton).

This differs from *X. fumigatus* in having only a single lanceolate areolet in the middle of the thorax. The interstices of the elytra are very woolly and the transverse costæ are rather obscure and very close together.

**Xylobanus intricatus.**

(Plate XI. fig. 3.)

Fuscus, subopacus; thorace subnitido, medio antice carinâ brevi, postice areolâ angustâ lanceolatâ; elytris octocostatis, interstitiis costis numerosis transversis minus approximatis. ♀.

Long. 3 lin.

*Hab.* Java (J. C. Bowering, Esq.).

Greyish fuscous. Thorax reflexed at the sides; with a narrow

mesial lanceolate areolet extending from the base to a little before the middle, joined to the anterior margin by a carina. Elytra a little widened towards their apex; the four costæ distinct; the interstices not woolly, furnished with numerous distinct transverse costæ, which divide the surface into nearly square spaces.

### **Xylobanus confusus.**

(Plate XI. fig. 2.)

Parallelus, ater, opacus; thorace septemareolato, lateribus ochraceis; elytris quadricostatis, interstitiis obsolete punctatis, costis tenuibus numerosis transversis. ♀. Long. 4 lin.

*Hab.* Batchian (*Wallace*).

Thorax yellow, with a broad black mesial stripe, the anterior border and the margins obscurely punctured. Elytra with the four costæ distinct; the interstices have a dull woolly appearance, very obscurely punctured, with very numerous fine transverse costæ, which are rather close together but somewhat irregular.

This and the following species are somewhat aberrant forms, and are therefore placed at the end of the genus.

### **Xylobanus mixtus.**

(Plate XI. fig. 5.)

Brevior, atro-fuscus, opacus, pubescens; thorace septemareolato; elytris quadricostatis. Long.  $3\frac{1}{4}$  lin.

*Hab.* Waigiou (*Wallace*).

Dark fuscous, with the incrassated lateral margin of the thorax rather paler. The posterior angles of the thorax are slightly diverging and acute; the seven areolets are well defined. Each elytron has four distinct costæ, and in the first and fifth interstices, as well as at the base of the second, third, and fourth, a fine intermediate costa may be traced; the interstices have numerous transverse costæ, placed somewhat close together, dividing the surface into strongly transverse quadrangular spaces, except the first and fifth interstices and the extreme base of the others, which have two rows of irregular punctures, these rows being divided by the fine intermediate costæ above mentioned.

This species is of particular interest, on account of its showing the commencement of the intermediate costæ on the elytra met with in *Metriorrhynchus*.

### **PORROSTOMA.**

*Castelnau, Silbermann's Rev. Zool.*, iv. 1836, p. 26.

Rostrum prolonged. Antennæ dentate, more strongly so in the male than in the female. Thorax with seven areolets. Elytra sub-

parallel, each with nine parallel costæ, the alternate ones less elevated and sometimes very obscure.

The type of this genus is *erythropterum*, Er.

### **Porrostoma brevirostre.**

(Plate XI. fig. 4.)

*Waterh., Trans. Ent. Soc., 1877, p. 74, pl. i. figs. 13-14.*

Nigrum : elytris rufis.

Long. 6 lin.

*Hab.* N.W. coast of Australia, and Moreton Bay.

Closely resembles *P. erythropterum*, Er., but has the rostrum shorter, scarcely longer than broad.

### **Porrostoma abdominale.**

(Plate XI. fig. 10.)

*Waterh., Trans. Ent. Soc., 1877, p. 75, pl. i. figs. 19-22.*

Nigrum : thoracis lateribus, elytris (apice excepto), coxis, femoribus basi abdominisque marginibus flavorufis; rostro elongato, sat acuminato; antennis latis; thorace septemareolato, postice medio nigro; elytris quadricostatis, interstitiis regulariter biseriatim foveatis, seriebus costâ tenuissimâ divisis, apice nigro. ♂, ♀.

Long.  $6\frac{3}{4}$  lin.

*Hab.* East Australia, Queensland.

♂. Antennæ broad, opaque, scarcely more than half the length of the elytra: the third joint about one third longer than its greatest breadth, very little narrowed at the base, the lower anterior angle produced at right angles with the axis of the joint, the produced part one third the length of the entire joint, obtuse at its apex; the fourth to eighth joints shorter, but of the same form; the ninth and tenth a trifle longer and having the produced part more oblique. Thorax deeply bisinuate at the base. The coxæ, the femora (except at their apex), the sides of the first six abdominal segments and the apical segments orange-red.

The female has the antennæ much less strongly dentate.

### **Porrostoma elegans.**

(Plate XI. fig. 6.)

*Waterh., Trans. Ent. Soc., 1877, p. 75, pl. i. figs. 23-27.*

Nigrum; thorace elytrisque ferrugineo-rufis, illo areolis posterioribus in parte nigris, scutello nigro; elytris parallelis, quadricostatis (basi fere octocostatis), interstitiis regulariter biseriatim foveatis. ♂, ♀.

Long. 6 lin.

*Hab.* Rockhampton, Clarence River, &c.

Rostrum one line in length, shining, thick at the base, narrowed at the apex, impressed at the sides, with a small elongate puncture in front near the base, gently emarginate at the apex, finely and closely punctured at the base, sparingly punctured towards the apex; labrum rather elongate, acuminate in front, distinctly and moderately thickly punctured; mandibles pitchy. Antennæ two thirds the length of the elytra, moderately stout. Thorax with the areolets well defined, the central posterior one black anteriorly, the two lateral posterior areolets marked with black internally. Elytra nearly parallel; each elytron with four costæ; the interstices with regular double rows of foveæ, the rows divided by a fine but distinct costa.

### *Porrostoma uniforme.*

(Plate XI. fig. 7.)

*Waterh., Trans. Ent. Soc., 1877, p. 76, pl. i. figs. 28-31.*

Nigrum; thorace, scutello elytrisq. ferrugineo-rufis; rostrum elongato, crebre subtiliter punctulato, subopaco, apice emarginato; mandibulis piceis; thorace septemareolato; elytris quadricostatis, subparallelis, interstitiis irregulariter biserialim foveatis. ♂.

Long.  $4\frac{3}{4}$  lin.

*Hab.* Port Bowen.

Rostrum scarcely more than half a line in length, thick at the base, a little narrowed towards the apex, relatively shorter than in the preceding species, but of the same form, gently emarginate at the apex; labrum transverse, very slightly emarginate in front, and pubescent. Antennæ two thirds the length of the elytra; third joint slightly pitchy along the upper edge, the lower anterior angle produced, the produced part very short and oblique to the axis of the joint. Thorax strongly sinuate at the sides. Elytra quadricostate; the interstices with irregular double rows of foveæ, the costa dividing the rows not very distinct.

### *Porrostoma irregulare.*

(Plate XI. fig. 8.)

*Waterh., Trans. Ent. Soc., 1878, p. 76, pl. i. figs. 18, 18a.*

Nigrum; antennis simplicibus; thorace rufo-flavo, medio nigro, scutello nigro; elytris rufo-flavis, quadricostatis, interstitiis biserialim punctatis. ♂.

Long. 3 lin.

*Hab.* East Australia, Mackenzie River.

Rostrum a little longer than broad. Antennæ simple, not dentate; the third joint one third longer than the following, its upper margin pale; the joints scarcely obliquely truncate at their apex; the lower angle slightly less than a right angle, but not produced. Elytra quadricostate, the costa next the suture obsolete posteriorly; the interstices with two irregular lines of punctures, the lines not separated by a costa.

**Porrostoma textile.**

(Plate XI. fig. 9.)

**Nigrum** : thorace, scutello elytrisq̃ læte flavo-rufis. ♀.

Long. 7 lin.

*Hab.* Moreton Bay.

A rather broad species. Rostrum rather long, shining, very sparingly punctured in front. Antennæ long and broad, not diminishing towards the apex ; each joint with a carina parallel to the lower margin. Thorax broad, narrowed in front, with seven areolets. Elytra each with four distinct costæ ; the interstices with two regular rows of foveæ, the rows divided by a distinct fine costa.

**Porrostoma russatum.**

(Plate XI. fig. 11.)

*Waterh., Trans. Ent. Soc.*, 1878, p. 77, pl. i. figs. 36-38.

**Nigrum** : thorace, scutello, elytris (apice excepto), coxis, femoribusq̃ basi flavo-rufis ; rostro picco, nitido ; elytris quadricostatis, subparallelis, interstitiis biserialim foveatis. ♀. Long. 6 lin.

*Hab.* Port Bowen.

Very close to *P. apicale*, but differs, besides in the coloration, in having the antennæ a little broader ; the ninth and tenth joints are not transverse. The rostrum is very smooth, only punctured at the sides and at the base. The four anterior femora are tipped with black ; the posterior pair are black, except at the extreme base. The middle posterior areolet of the thorax is black anteriorly. The sculpture of the elytra is more regular and distinct ; two of the costæ are very strong at the base.

**Porrostoma apicale.**

(Plate XII. fig. 1.)

*Waterh., Trans. Ent. Soc.*, 1878, p. 77, pl. i. figs. 39-44.

**Flavo-rufum**, angustius ; antennis, tarsis, abdomine, elytrorumq̃ apice nigris. ♂. Long. 5 lin.

*Hab.* Cape York and Port Essington.

Head shining ; rostrum three-quarters of a line in length, moderately broad at the base, narrowed at the apex ; labrum and palpi pitchy, the former longer than broad, acuminate at the apex ; eyes prominent, black. Antennæ about three-quarters the length of the elytra, black, except the basal joint, which is pitchy ; third joint three times the length of its greatest width, the lower anterior angle produced, the produced part one-sixth the length of the entire joint ; the fourth to tenth joints gradually increasing in length, but all shorter than the third, distinctly and regularly narrowed to their

bases. Thorax a little narrowed and rounded in front; the sides a little sinuous; the dorsal ridges well marked, dividing the surface into seven areolets. Elytra parallel, very long, tipped with black, quadricostate; the interstices with two rows of transverse foveæ, the rows divided by a fine carina. The apical half of the posterior tibiæ, the tarsi, and abdomen black.

The example from Port Essington has the posterior tibiæ entirely yellowish red.

### METRIORRHYNCHUS.

Guérin-Ménév., *Voy. d. l. Coquille*, 1838, *Entom.* p. 72.

This genus only differs from *Porrostoma* in having a short rostrum; it is, however, convenient to adopt it.

The type of the genus is *parallelus*, Guérin, from New Guinea.

#### *Metriorrhynchus fuscolineatus*.

(Plate XII. fig. 4.)

*Porrostoma lineatum*, *Waterh., Trans. Ent. Soc.*, 1877, p. 78, pl. i. figs. 45-48.

Fusco-niger; thoracis limbo elytrisque obscure flavis, his quadricostatis, interstitiis infuscatiss, biserialim foveatis; rostro latitudine brevior. ♀.

Long. 6 lin.

*Hab.* N.W. Australia and Hobart Town.

Thorax blackish, with the lateral and anterior margins yellowish. Elytra yellowish, with the interstices dusky and with a double series of square punctures, the rows are not distinctly divided by a ridge.

Since this species was originally described I have found that *Omalysus lineatus*, Hope, then unknown to me, belongs to this genus, so that the name *lineatum* has to be changed.

#### *Metriorrhynchus togatus*.

(Plate XII. fig. 2.)

*Porrostoma togatum*, *Waterh., Trans. Ent. Soc.*, 1878, p. 78, pl. i. figs. 49-52.

Niger; elytris elongatis, flavo-rufis, apice nigro, quadricostatis, interstitiis biserialim punctatis; rostro latitudine paulo brevior, medio canaliculato, utrinque foveâ magnâ nitidâ. ♂. Long. 5 lin.

*Hab.* N.W. Australia.

The rostrum is scarcely as long as broad, narrowed towards the apex, very thickly and extremely finely punctured. The elytra are dull yellowish red, with the apex black, the black more advanced on the suture than at the sides; each elytron has four costæ; the interstices with two rows of square punctures, the rows not distinctly divided by a costa.

**Metriorrhynchus scalaris.**

(Plate XII. fig. 3.)

*Porrostoma scalaris*, *Waterh., Trans. Ent. Soc.*, 1878, p. 79, pl. i. figs. 53-56.

Ater; elytris apice sordide flavo; rostro latitudine brevior; elytris quadricostatis, interstitiis reticulatis. ♀. Long.  $4\frac{1}{2}$  lin.

*Hab.* N.W. Australia.

Thorax with seven distinct arcolets. The elytra parallel, with the extreme apex dirty yellow; the four costæ on each elytron are distinct, but the third is less so towards the apex; the interstices have rather closely placed irregular transverse ridges, which are frequently oblique, or when half across the interstice divide into two, forming a Y placed horizontally (Y), giving a reticulated appearance to the elytra; here and there the intermediate very fine longitudinal costæ may be traced.

**Metriorrhynchus fallax.**

(Plate XII. fig. 5.)

*Porrostoma fallax*, *Waterh., Trans. Ent. Soc.*, 1877, p. 79, pl. i. figs. 57-60.

Elongatus, parallelus, niger; thorace elytrisque flavo-rufis, his apice nigro; rostro latitudine paulo brevior, opaco, utrinque foveâ nitidâ; elytris sat convexis, parallelis, quadricostatis, interstitiis biserialim punctatis. ♀. Long.  $6\frac{1}{2}$  lin.

*Hab.* Moreton Bay.

Elytra about five times as long as the thorax, black at the apex; the interstices with two regular rows of square punctures, the rows divided by a fine costa.

This species is peculiar for its long, narrow form.

**Metriorrhynchus rufipennis.**

(Plate XII. fig. 6.)

*Lycus rufipennis*, *Fabr., Syst. El.*, ii. p. 114.

*Porrostoma salebrosum*, *Waterh., Trans. Ent. Soc.*, 1877, p. 79, pl. ii. figs. 61-64.

Statura et color *P. erythropteri*, at minor; rostro brevissimo. Niger; elytris rubris, quadricostatis, interstitiis biserialim punctatis. ♂. ♀. Long. 4 lin.

*Hab.* Melbourne and Van Diemen's Land.

Differs from *P. erythropterus* in having the rostrum very short, with a deep fovea in front of each eye. Third joint of the antennæ as broad as long. Elytra quadricostate; the interstices with two



rows of punctures, the rows separated only at the base of the elytra by an obscure costa.

The female differs from the male in having the antennæ a little less strongly dentate.

It is difficult to decide whether *Lycus rufipennis*, F., should be considered identical with *P. erythropterum*, Er., or with *P. salebrosum*, W. I have here adopted Erichson's view, by which the latter becomes synonymous with the Fabrician species.

### **Metriorrhynchus hæmorrhoidalis.**

Porrostoma hæmorrhoidale, *Waterh., Trans. Ent. Soc.*, 1877, p. 79, pl. ii. figs. 61a-64a.

Elongatus, parallelus, niger; elytrorum apice rufo; elytris quadricostatis, interstitiis biserialim cancellato-punctatis. ♂, ♀.

Long.  $4\frac{3}{4}$  lin.

*Hab.* Van Diemen's Land.

Dull black. Rostrum shorter than broad. Thorax small, divided above into seven areolets. Elytra with the four costæ distinct; the interstices with two rows of large irregular punctures, the rows not divided by a distinct costa; the apices are red.

This species resembles *M. scalaris*, but is much longer and narrower, and the rows of punctures on the interstices of the elytra are much more regular.

*Lycus atratus*, Fabr. (Syst. El., ii. p. 113) may perhaps be a black variety of this species, and both are possibly varieties of *rufipennis*, F.

### **Metriorrhynchus plagiatus.**

(Plate XII. fig. 8.)

Porrostoma plagiatum, *Waterh., Trans. Ent. Soc.*, 1877, p. 80, pl. ii. figs. 65-68.

Ater; elytris marginibus apiceque rubris; rostro latitudine breviori, utrinque impresso; antennis bene dentatis. ♂.

Long.  $4\frac{3}{4}$  lin.

*Hab.* E. Australia.

Rostrum very short, shorter than broad, compressed in front, with a deep impression in front of the eye. Elytra deep red, with a black patch extending from the scutellum to the posterior two thirds, somewhat in the form of an **A**; quadricostate; the interstices with two rows of punctures, not separated distinctly by a carina.

Possibly this is a variety of the foregoing species.

**Metriorrhynchus lugubris.**

(Plate XII. fig. 7.)

Porrostoma lugubre, *Waterh., Trans. Ent. Soc.*, 1877, p. 80, pl. ii. figs. 60-72.

Ater: rostro nullo, clypeo leviter emarginato; elytris postice paulo ampliatis, quadricostatis, interstitiis biseriatis foveolatis, suturâ marginibusque tenuiter ferrugineis. ♂. Long. 5 lin.

*Hab.* Australia.

Very close to *hemorrhoidalis*. There is absolutely no rostrum. The incrassated suture and margins of the elytra are dull rusty red. The thorax is strongly angularly constricted in the middle, so that the posterior angles diverge and are acute.

**Metriorrhynchus flavicollis.**

(Plate XII. fig. 9.)

Elongatus, parallelus, niger, supra opacus; thorace flavo, obsoleto septemareolato, marginibus vix reflexis; scutello flavo, medio infuscato; elytris quadricostatis, basi octocostatis, interstitiis ereberime biseriatis punctatis. Long.  $5\frac{1}{2}$  lin.

*Hab.* Batchian.

Thorax gently convex on the disk, the mesial lanceolate areolet deep and extending from the base to the anterior margin. Elytra parallel; each elytron with four complete strong costæ, and four intermediate ones at the base; the first and second of the intermediate costæ are traceable nearly to the apex of the elytra; the interstices are closely punctured.

The ridges which divide the thoracic arcolets are very obtuse.

In the British-Museum collection are several specimens of a species from Celebes which I have determined to be *Lyceus thoracicus*, Fabr. (Syst. El., ii. p. 117), with which *M. cyanopterus*, Redt., seems to be synonymous. *M. flavicollis* differs from these in having the elytra black, the thorax is more convex on the disk, the sides are less reflexed, and the mesial areolet is very strong and deep; whereas in *M. thoracicus* the mesial areolet is almost obliterated. The elytra are very similar in sculpture, but in *thoracicus* the interval between the third and fourth costæ has two lines of very close transverse punctures which meet in the middle of the interstice; in *flavicollis* the punctures in this interstice are less straight, transversely ovate, and they do not meet so closely in the middle of the interstice.

**Metriorrhynchus kirschii.**

Dictyopterus lineatus, *Kirsch, Mitth. d. k. zool. Mus. zu Dresden*, 1875.

Ater, supra opacus; thorace septemareolato; elytris parallelis,

quadricostatis (basi octocostatis, costis ferrugineo-rufis), interstitiis crebre biserialim punctatis. Long. 5-7 lin.

*Hab.* Penang, Singapore, Borneo, Sumatra.

Thorax dull velvety black. Elytra each with four strong costæ, which are broader at the base; the interstices with two lines of crowded punctures, which are small and round at the base (where the lines are divided by a fine costa), but rather more transverse and confused towards the apex; near the apex the lines are divided by a fine costa; all the costæ are rusty red for at least half their length.

*Varieties.* Thorax with the elevated lines rusty yellow, or with the entire thorax red. One specimen from Penang has the elytra almost entirely yellow, with only the apex black, the punctures dusky.

I think there can be no doubt that this is the *Dict. lineatus*, Kirsch; that author's name is, however, most unfortunately preoccupied for a species named by Hope. It appears somewhat doubtful whether this should be separated as distinct from *Lycus inequalis*, Fabr.\* (Syst. El., ii. p. 112). The specimens in the Museum collection which I have determined to be the Fabrician species average a little larger; the strong costæ of the elytra are of equal thickness throughout, and the intermediate costæ are very fine, not more elevated at the base, and are visible throughout the whole length.

### **Metriorrhynchus kirschii, var. ?**

(Plate XII. fig. 10.)

This differs from what I have above described as *M. kirschii* in having the mesial arcole of the thorax more obtuse in front and more removed from the anterior margin; the intermediate costæ of the elytra are distinct and equal throughout their length. The base of the femora and the base of the tibiæ are yellow, as is also the sternum.

*Hab.* Batchian.

### **Metriorrhynchus rusticus.**

(Plate XIII. fig. 2.)

Atro-fuscus, opacus, parallelus; thorace septemareolato, flavo, scutello nigro; elytris basi flavis, octocostatis, costis alternatis minus elevatis, interstitiis crebre punctatis, punctis transversis. ♀. Long. 7½ lin.

*Hab.* Mysol (Wallace).

Allied to *M. inequalis*, but more parallel, broader in the thorax, and with shorter antennæ, the third joint of which is only a little longer than its greatest width, more sinuate at the apex; the fol-

\* Omitted from Gemminger and v. Harold's catalogue.

lowing joints are more strongly dentate. Thorax pale yellow, the sides much reflexed. Elytra with the basal third pale yellow; each elytron with eight costæ, the alternate ones less elevated; the interstices with rather close transverse punctures.

**Metriorrhynchus cribripennis.**

(Plate XIII. fig. 6.)

Niger, subtus nitidus, supra opacus; thorace septemareolato, ochraceo; scutello ochraceo, apice fortiter exciso; elytris ochraceis, thorace latioribus, apicem versus paulo latioribus, quadricostatis, interstitiis biserialim confertim transverse costatis, seriebus costâ tenui divisâ. Long. 10 lin.

*Hab.* Ternate, Batchian.

This species is very distinct on account of the elytra being less parallel than in any of the foregoing, slightly widened towards the apex. The transverse costæ of the interstices of the elytra are extremely close and distinct, with the intervals between these costæ scarcely as much as the thickness of the costæ themselves. Abdomen slightly bluish black.

**Metriorrhynchus philippinensis.**

(Plate XIII. fig. 4.)

*M. cribripenni* affinis; angustior, thorace paulo longiori; scutello apicem versus angustato, apice exciso; abdomine nigro-cyaneo.

Long. 4½–8 lin.

*Hab.* Philippine Islands (*H. Cuming*).

Very close to the preceding, but rather narrower, of a rather deeper ochraceous colour, the thorax a little more elongate, the mesial areolet narrower. Scutellum narrowed towards the apex, deeply but more narrowly excised at the apex. Elytra similarly sculptured to the preceding; but the elytra being a little narrower, the interstices are narrower, and consequently the transverse costæ are shorter. The abdomen and sterna are brighter steel-blue-black.

**Metriorrhynchus sericeus.**

(Plate XIII. fig. 5.)

Elongatus, parallelus, ater; antennis brevioribus; thorace, scutello elytrisque ferrugineo-ochraceis, his parallelis, octocostatis, costis intermediis parum elevatis, interstitiis crebre transverse costatis; abdomine nigro-cyaneo. ♂, ♀.

Long. 7–9 lin.

*Hab.* Java (*J. C. Bowring, Esq.*).

An elongate, parallel species, with rusty yellow thorax, scutellum and elytra, and blue-black abdomen. The antennæ are unusually short and stout; the third joint, however, is very long. Thorax with

seven areolets, broad trapeziform. Elytra with the interstices very silky, with closely set transverse costæ; the spaces between these costæ rather less than the thickness of the transverse costæ themselves.

The male example has the sculpture much obscured by the fine silky pubescence, which makes them appear more roughly punctured.

***Metriorrhynchus sericeus*, var.**

This differs from the foregoing in having the thorax ochraceous, the elytra yellow, with the extreme apex fuscous; the apex, too, is more obtuse.

*Hab.* India (*from Children's coll.*).

It is probable that this may prove to be a distinct species.

***Metriorrhynchus sericans*.**

(Plate XIII. fig. 7.)

Fusco-niger; thorace, scutello elytrisque rufo-ochraceis. ♂.

Long. 7 lin.

*Hab.* India (*J. C. Bowring, Esq.*).

This species closely resembles *M. sericeus*, but is less parallel; the colour of the upper surface is of a deeper reddish ochraceous; the scutellum is comparatively slightly notched at the apex, and the elytra are less obtusely rounded at the apex.

***Metriorrhynchus immersus*.**

(Plate XIII. fig. 1.)

Elongatus, ater, supra opacus; thorace nigro-cyaneo, areolâ discoidali latissimâ; elytris basi flavis. ♂; ♀. Long.  $4\frac{2}{3}$ – $7\frac{1}{2}$  lin.

*Hab.* Aru I. and Dorey (*Wallace*).

Very close to *M. ephippiger*, Guérin, but appears to be distinct. The basal third only of the elytra is yellow, and the line of demarcation is very sharply defined and nearly straight. The thorax is more distinctly blue-black, and the mesial areolet is very broad at the anterior third, at which part it occupies one third the width of the thorax. The elytra have each the same eight costæ, the intermediate ones being scarcely raised; the punctures in the interstices are sometimes round, and in the broader females they are close and strongly transverse.

The male example is much smaller than the female, and has the scutellum yellow.

The specimen in the Museum collection which has been determined to be *M. ephippiger*, Guériu (*Voy. Coquille*, p. 73), is from Dorey; it is a male, and measures  $6\frac{1}{2}$  lines in length.

There is another specimen from Waigiou, a female, which differs

from that from Dorey in being relatively considerably shorter; the discoidal thoracic areolet is extremely narrow; the elytra have the lines of punctures rather stronger, and the punctures are more transverse. This specimen may prove to belong to a distinct species.

***Metriorrhynchus nobilis.***

(Plate XIII. fig. 3.)

Elongatus, ater, opacus; antennis sat brevibus; thorace septem-areolato; elytris octocostatis, interstitiis crebre fortiter punctatis, apice late flavo. ♀. Long. 5 lin.

*Hab.* New Guinea (*Wallace*).

Thorax rather small, the mesial areolet nearly extending to the anterior margin, moderately broad before the middle. Elytra with the eight costæ very distinct, the alternate ones less elevated in the middle of the elytra, but equally distinct at the base; the interstices have each a single line of close, strong punctures. The yellow at the apex of the elytra extends for rather more than one third of their length.

At some little distance from the apex the fifth and seventh fine costæ are united to the sixth; and the fifth and sixth, and the seventh and eighth lines of punctures become united, the punctures then being transverse. I believe these abbreviated costæ to be a malformation; but the two elytra being exactly similar, it may be normal.

***Metriorrhynchus vagans.***

(Plate XIII. fig. 10.)

Ater; thorace rufo-flavo, septemareolato; elytris octocostatis, interstitiis biserialim crebre fortiter punctatis, seriebus lineâ tenui divis. ♀. Long. 5 lin.

*Hab.* Sumatra.

A much shorter species than any of the preceding, with very coarsely punctured interstices to the elytra. The thorax has the seven areolets very distinct, the posterior angles are acute and slightly diverging.

This species closely resembles *Bulenides turbidus* (before described), but differs in the form of the thorax, which has also seven areolets instead of a single narrower discoidal one.

***Metriorrhynchus lineatus.***

(Plate XIII. fig. 9.)

*Omalysus lineatus*, *Hope*, *Gray's Zool. Miscell.*, 1831, p. 26.

"Sanguineus, thorace tuberculato, elytrisq[ue] lineatis."

Long. 6 lin., lat.  $1\frac{3}{4}$  lin.

*Hab.* Nepal (*Gen. Hardwicke*), Coimbatore (*M. J. Walhouse, Esq.*).

Black, moderately broad and depressed; thorax, scutellum, and elytra yellowish scarlet\*, densely clothed with silky pubescence. Thorax ample, with seven areolets, the lines dividing the lateral ones very obscure, the discoidal one narrow, joined to the anterior margin by a carina; the posterior angles more or less sharp. Elytra each with four obtuse costæ; the interstices with two rows of shallow square punctures, the rows divided by a fine line, the punctures much obscured by dense silky pubescence.

This is a rather short, broad, and depressed species.

*Var. A.* Differs from the type in having the scutellum black; the thorax has the line dividing the lateral areolets entirely wanting, and the punctures of the elytra are much more distinct. ♂, ♀.

*Hab.* Allahabad (*J. C. Bowring, Esq.*).

*Var. B.* Thorax broad, with seven areolets. Elytra each with four costæ; the interstices with two rows of rather transverse shallow punctures, the rows not divided by any visible line; the punctures and all the surface clothed with densely matted pubescence.

*Hab.* Ceylon.

### **Metriorrhynchus astutus.**

(Plate XIII. fig. 8.)

*Lycus astutus*, *Walker, Ann. & Mag. N. Hist.*, 1858, ii. p. 281.

Niger, supra opacus, pubescens; thorace elytrisq. rufo-ochraceis, his apice nigris. ♂, ♀. Long.  $3\frac{1}{2}$ –6 lin.

*Hab.* Ceylon (*Dr. Templeton* and *Dr. Thwaites*).

This may perhaps be a variety of *M. lineatus*, Hope, having the apical third of the elytra black. The punctures in the striae of the elytra are, however, rather smaller than in any examples of *M. lineatus*.

The scutellum is sometimes red and sometimes black. The ridges on the thorax are occasionally very much obliterated.

### **Metriorrhynchus simulans.**

(Plate XIII. fig. 11.)

Fuscus; elytris basi obscure ferrugineis, vix pubescentibus. ♂.

Long.  $3\frac{1}{2}$ –4 $\frac{1}{4}$  lin.

*Hab.* Penang (*J. C. Bowring, Esq.*).

Very close to *M. astutus*, but smaller and fuscous, clothed with ashy tomentum; the thorax relatively smaller and narrower, with seven distinct areolets. Scutellum fuscous. Elytra with the basal half obscure ferruginous, scarcely pubescent; each elytron with four

\* The Hopean type is now obscure yellow.

strong costæ; the interstices with two rows of distinct quadrate punctures, the rows divided by a very fine line.

*Var.* Thorax, scutellum, and base of elytra rusty-red.

The elytra being scarcely pubescent gives this species a different appearance from that of *M. ustutus*.

### ***Metriorrhynchus atrofuscus*.**

(Plate XIV. fig. 1.)

Atro-fuscus, opacus; thorace septemareolato, margine antico crebre punctato; elytris quadricostatis, interstitiis crebre biseriatim punctato-striatis, dimidio basali fusco. ♂. Long.  $2\frac{1}{3}$  lin.

*Hab.* Borneo (*Wallace*).

Head of the male rather large; eyes large. Thorax angular in front, sinuate at the sides: with the lateral areolets not very distinctly divided, the anterior ones rather thickly punctured. Each elytron with four costæ, the intervals with two lines of small, close, rather elongate punctures; the basal half of the elytra is pale yellowish fuscous, the punctures in the striæ black.

### ***Metriorrhynchus rubicundus*.**

(Plate XIV. fig. 2.)

Piceo-niger, elongatus; thorace, scutello elytrisq. rufo-ochraceis; elytris quadricostatis, interstitiis fortiter biseriatim punctato-striatis, seriebus lineâ tenui divis. ♀. Long. 4 lin.

*Hab.* Sylhet (*J. C. Bowring, Esq.*).

Thorax with seven distinct areolets, the mesial one very narrow; the anterior border rather roughly punctured; the discoidal and basal areolets slightly dusky. Elytra with the four costæ well marked, the punctures in the interstices are very distinct.

This is an elongate narrow species.

### ***Metriorrhynchus flavolateralis*.**

(Plate XIV. fig. 4.)

Depressus, parallelus, fusco-ater; thoracis lateribus pallide flavis; elytris crebre punctato-striatis, interstitiis angustissimis. ♀.

Long.  $3\frac{1}{2}$  lin.

*Hab.* Aru I. (*Wallace*).

A very dull species, with a woolly appearance above. The thorax is short, very much rounded anteriorly, with seven areolets, the discoidal one broad, the anterior ones roughly punctured; the yellow at the sides is narrow. Eight very narrow costæ are distinct on each elytron, but the second, fourth, and sixth are a little more elevated. The sterna and base of the femora are pitchy yellow; the abdomen pitchy.



**Metriorrhynchus ater.**

(Plate XIV. fig. 7.)

Ater, opacus ; thorace trapezoidali, nitido, septemareolato ; elytris quadricostatis, interstitiis biseriatim crebre punctato-striatis, seriebus lineâ tenui divisis. ♂, ♀. Long.  $3\frac{1}{2}$  lin.

*Hab.* Dorey, New Guinea, and Aru I. (*Wallace*).

Dull black, or sometimes tinged with fuscous. The thorax has the sides nearly straight, the anterior margin somewhat rugulose, the rest of the surface is shining. The costæ of the elytra are all distinct at the base (the second and fourth rather stronger than the others), but posteriorly the intermediate ones are merely very fine lines dividing the rows of punctures, and sometimes are scarcely perceptible.

The two examples in the British-Museum collection from Aru I. have the thorax less trapezoidal—that is, the sides are less straight, and the fore part is more rounded. These may prove to be a distinct species. One of them measures 5 lines in length.

**Metriorrhynchus angustulus.**

(Plate XIV. fig. 5.)

Elongatus, parallelus, angustus, picco-niger, opacus ; thoracis lateribus, pectore, femorum tibiarumque basi flavis ; elytris quadricostatis, interstitiis biseriatim crebre obsolete punctato-striatis, plagâ triangulari scutellari piceâ ; abdomine picco. Long. 3 lin.

*Hab.* Dorey, New Guinea (*Wallace*).

Thorax transversely quadrate, the anterior margin arcuate, the sides straight ; above with seven areolets, the discoidal one extending from the base to the anterior margin. The costæ on the elytra are fine ; the interstices each with a double series of obsolete punctures, the series confused in the middle of the elytra ; fine intermediate costæ may be traced at the extreme base.

**Metriorrhynchus puncticollis.**

(Plate XIV. fig. 3.)

Depressus, parallelus, fuscus, opacus ; thorace marginibus anticis et lateralibus crebre ruguloso-punctatis, flavo-fuscis ; elytris parallelis, crebre evidenter punctato-striatis, interstitiis angustis, subæqualibus. ♂, ♀. Long. 4 lin.

*Hab.* Dorey, New Guinea (*Wallace*).

Thorax with seven areolets, the anterior ones not very distinctly divided ; the anterior border slightly angular ; the four anterior areolets thickly and rugosely punctured, somewhat inclined to dusky yellow ; the lateral margins also rugosely punctured. Elytra each

with ten lines of close, moderately strong punctures, the intervals extremely narrow, the alternate ones scarcely more distinct.

The male is rather narrow, the thorax broadest in front, slightly constricted at the middle.

The female is broader and more parallel, and the thorax is quadrate.

*Var.* A single female example differs from the typical form in having the thorax, scutellum, and legs yellow; the thorax is slightly transverse and a little constricted at the middle. The elytra have the second, fourth, and sixth interstices distinctly costiform. This may prove to be a distinct species.

### **Metriorrhynchus orientalis.**

(Plate XIV. fig. 8.)

Depressus, parallelus, ater, opacus: thorace lato, sat transverso, sordide ochraceo: elytris sordide ochraceis, quadricostatis, interstitiis fortiter biserialim punctato-striatis, seriebus lineâ tenui divis. Long.  $4\frac{1}{2}$  lin.

*Hab.* Siam (*J. C. Bowring, Esq.*).

Broader than the preceding, parallel, depressed, of a rusty yellow above. Antennæ very broad. Thorax somewhat reflexed at the sides, with seven areolets; the four anterior areolets and the sides thickly and roughly punctured. Elytra with the four costæ well marked; the punctures in the rows are very strong; the fine line which divides the rows is very fine, but distinct.

### **Metriorrhynchus dilutus.**

(Plate XIV. fig. 6.)

Parallelus, opacus, dilute flavus; antennis fuscis, articulo basali flavo; thorace marginibus crebre punctatis: elytris quadricostatis, interstitiis biserialim crebre punctatis (punctis elongatis), dimidio apicali fusco; abdomine fusco, ano flavo. Long.  $3\frac{1}{2}$  lin.

*Hab.* Mysol (*Wallace*).

Thorax quadrate, slightly transverse, the anterior areolets not completely divided anteriorly; these and the lateral margins thickly punctured. Elytra with the four costæ distinct, the intervals with two rows of rather elongate punctures, with an extremely fine line dividing the rows. The outer side of the tibiæ and the tarsi are somewhat dusky.

### **Metriorrhynchus cinctus.**

(Plate XIV. figs. 9 & 10.)

*Waterh., Trans. Ent. Soc., 1877, p. 80.*

Niger; thoracis limbo elytrisque flavo-rufis, his apice nigris. ♂, ♀. Long. 4 lin.

*Hab.* Queensland, Brisbane.

*Var.* Thorace, pectore femorumque basi rufo-flavis.

*Hab.* Torres Straits, Batchian, Aru I.

The thorax has seven areolets, but usually the mesial lanceolate one only is distinct; the surface is rather roughly punctured, except the posterior part of the disk. Each elytron has eight costæ, the alternate ones rather narrower and less elevated; the punctures in the lines are distinct and rather strong.

The type specimen and other specimens from Australia have the disk of the thorax black. The other examples, from Aru I., Batchian, and Torres Straits, have the thorax entirely reddish yellow, except one example from Aru I., which has a little dusky mark. These specimens differ, moreover, in having the sterna and base of the femora also reddish yellow.

The males have the antennæ pectinate. In the females they are only dentate (Plate XIV. fig. 10).

### SYNCHONNUS.

Rostrum none. Antennæ dentate. Thorax with a lozenge-shaped mesial areolet, which extends from the base to the anterior margin; from each lateral angle of this areolet there is a straight carina, which extends to the middle of the side; by this means the surface is divided into five areolets. Elytra with four costæ, the interstices irregularly punctured.

This genus is proposed for the reception of a single Australian species.

#### *Synchonnus clientulus.*

(Plate XV. fig. 2.)

*Porrostoma clientulum*, *Waterh., Trans. Ent. Soc.*, 1877, p. 81, pl. ii. figs. 78–81.

Ater; palpis basi obscure testaceis, thorace quinqueareolato; elytris quadricostatis, flavis, apice nigro. ♀. Long. 4 lin.

*Hab.* Moreton Bay.

Elytra of a dull rusty yellow. pubescent, with the apical fifth black, the black not advanced on the suture: the second of the four costæ only well defined and extending to the apex, the others less distinct; the interstices rather irregularly but moderately strongly punctured, the punctuation somewhat obscured by the pubescence.

### CONDERIS.

Rostrum none. Antennæ strongly dentate. Thorax with five distinct areolets. Elytra each with four costæ; the interstices with a line of indistinct punctures on each side, or with a double row of quadrate punctures.

*Calopteron signicolle*, Kirsch, is the type of this genus.

**Conderis signicollis.**

(Plate XV. fig. 1.)

*Calopteron signicolle*, *Kirsch, Mitt. aus d. k. zool. Mus. zu Dresden*, 1875.

*Metriorrhynchus* (gen. 28) *festivus*, *Waterh., Trans. Ent. Soc.*, 1878, pp. 102 & 110.

*Metriorrhynchus* (gen. 28) *velutinus*, *Waterh., Trans. Ent. Soc.*, 1878, p. 110.

**Niger**: thorace quinqueareolato, lineis elevatis rubris; elytris rubris, quadricostatis, interstitiis convexiusculis subinterruptis, obsolete biseriatis punctatis, unguiculis testaceis. ♂, ♀.

Long. 4-6 lin.

*Hab.* Sumatra (*Buxton*).

The male has the antennæ only slightly more dentate than in the female; they are rather broad, and of nearly equal width throughout in the typical specimen.

In the British-Museum collection there are three female examples, which differ from the type in having the antennæ less broad, less strongly dentate, more tapering towards the apex, and apparently, also, rather shorter; they have, moreover, the thorax entirely red. One of these specimens was received from Sumatra with the type examples, one is from India, and the other from Java from Mr. Bowring. There is also a single example, without locality, having the red thorax, which has the antennæ broad, as in the type example.

It seems best, at least for the present, to consider these specimens varieties of the same species.

The example which I named *M. velutinus* (*Trans. Ent. Soc.*, 1878, p. 110) has the mesial areolet of the thorax black, and the antennæ less robust; but I believe this will prove to be a variety of *C. signicollis*, *Kirsch*.

**Conderis major.**

(Plate XV. fig. 6.)

**Ferrugineo-niger**; thorace quinqueareolato, rufo; scutello elytrisque rufis, his quadricostatis, interstitiis biseriatis fortiter punctato-striatis. ♀.

Long. 7 lin.

*Hab.* Allahabad (*J. C. Bowring, Esq.*), Darjeeling (*Capt. Downes*).

Much larger and broader than the preceding species, and less velvety. Thorax with the mesial areolet small, lanceolate, not reaching the base nor the anterior margins. Scutellum obtuse at the apex, not emarginate. Each interstice of the elytra has a double row of very strong irregular quadrate punctures.

## STADENUS.

Rostrum none. Antennæ dentate. Thorax rather broad, with a mesial lanceolate areolet. Elytra parallel, with four costæ; the interstices with two lines of punctures, the lines divided by a very fine costa.

This genus is proposed for two Australian species. *Porrostoma dichroum*, W., is the type.

*Stadenus dichrous.*

(Plate XV. fig. 5.)

*Porrostoma dichroum*, *Waterh., Trans. Ent. Soc.*, 1877, p. 86, pl. ii. figs. 86, 87, and 1878, p. 102.

Niger, opacus; thorace lato, excavato, triareolato, areolâ medianâ lanceolatâ; elytris sordide flavis, apice nigris, quadricostatis, interstitiis biseriatim punctatis. ♀. Long. 5 lin.

*Hab.* King George's Sound.

Thorax with the sides much reflexed, the central areolet not reaching the anterior margin, but joined to it by a short earina. Elytra parallel, rusty yellow, with the apical third black; the interstices of the elytra with two regular rows of distinct quadrangular punctures, the rows divided by a very fine ridge. Body beneath shining black; legs dull.

*Stadenus inquinulus.*

(Plate XV. fig. 3.)

*Porrostoma inquinulum*, *Waterh., Trans. Ent. Soc.*, 1877, p. 81, pl. ii. figs. 82-86.

Ater; elytris margine anguste apiceque late ferrugineis; rostro fere nullo; thorace concavo, lateribus reflexis, disco areolâ lanceolatâ instructo; elytris quadricostatis, biseriatim reticulato-punctatis. ♂, ♀. Long. 5-5½ lin.

*Hab.* Australia.

The costæ of the elytra are distinct to the apex; the interstices have two rows of square punctures, the rows not distinctly divided by a carina. The male has the penultimate segment of the abdomen incised, and the antennæ are more strongly dentate.

## ACHRAS.

Rostrum none. Antennæ dentate. Thorax small, with five areolets. Elytra rather narrow at the base, gradually enlarged posteriorly; each elytron with four costæ, the intervals with rugose punctuation.

A single Australian species is all that is at present known of this genus.

**Achras limbatus.**

(Plate XV. fig. 7.)

*Porrostoma limbatum*, *Waterh., Trans. Ent. Soc.*, 1877, p. 81, pl. ii. figs. 88-91.

Atratus; thoracis elytrorumque marginibus flavis, thorace quinque-areolato; elytris postice paulo ampliatis, quadricostatis, interstitiis transversim reticulatis, apice arcuatim rotundato. ♂. Long.  $3\frac{1}{2}$  lin.

*Hab.* Australia.

Nearly black. The base of the third antennal joint, the base of the palpi, the base of the femora, and the coxæ obscure testaceous. The thorax has the central areolet well defined, extending from the base to the anterior margin; the ridges which divide the lateral areolets are somewhat obscure; the anterior margin is finely punctured. Of the four costæ on the elytra, the second and fourth are the more distinct, but none of them extend to the apex; the interstices have very numerous transverse ridges, which are very irregular and sometimes interrupted; towards the apex of the first interstice and in the fifth there are indications of an irregular intermediate longitudinal costa. The penultimate segment of the abdomen has a deep semicircular emargination.

**TAPHES.**

*Waterh., Trans. Ent. Soc.*, 1878, p. 102.

Insect rather short, having a velvety appearance. Antennæ scarcely dentate, beset with long fine hairs in the male. Thorax small, transverse, with a large lozenge-shaped discoidal areolet, its angles nearly reaching the margins. Elytra rather enlarged posteriorly, quadricostate; the interstices with two lines of punctures, these lines scarcely divided by a costa.

**Taphes brevicollis.**

(Plate XV. fig. 9.)

*Waterh., Trans. Ent. Soc.*, 1878, p. 110.

Ater, opacus, brevior; thorace transverso, areolis quinque obsoletis, scutello apice truncate; elytris basi thorace latioribus, postice ampliatis, læte rufis, quadricostatis, interstitiis biseriatim foveolato-punctatis.

♂. Long.  $2\frac{1}{2}$  lin., latr. elytr.  $1\frac{1}{3}$  lin.

♀. Long.  $3\frac{1}{4}$  lin., latr. elytr.  $1\frac{1}{4}$  lin.

*Hab.* Sarawak (*Wallace*).

With a velvety appearance above. Antennæ dull, compact. Thorax a little narrowed in front, straight at the sides, with the surface divided into five areolets; the central one broad lozenge-shaped, its anterior angle reaching the front margin and the lateral

angles nearly touching the sides of the thorax. Elytra having a velvety appearance; each interstice with two rows of large punctures, the rows not separated from each other by any distinct costa.

♂. Antennæ with long pubescence; penultimate segment of abdomen triangularly emarginate.

♀. Antennæ without long pubescence; abdomen simple.

### **Taphes frontalis.**

(Plate XV. fig. 4.)

*Waterh., Trans. Ent. Soc., 1878, p. 111.*

Ater, opacus; thorace tomentosus, transversus, obsolete quinque-areolato; elytris opacis, rubris, postice latioribus, quadricostatis, interstitiis biserialim foveato-punctatis. Long.  $3\frac{1}{2}$  lin.

*Hab.* Sumatra (*Buxton*).

With a velvety appearance above. Antennæ of the male fringed with long fine hair. Forehead between the antennæ rather acutely prominent, as in *Platyis minutus*, F., but more acutely. Thorax small, strongly transverse, a little narrowed in front; the sides straight; deeply impressed above on each side; with a lozenge-shaped mesial areolet, which is less broad than in the preceding species. Elytra deep dull red, rather broad, especially posteriorly; the interstices with double rows of rather irregular quadrate punctures.

This species is very close to *T. brevicollis*, but the forehead is more acutely prominent, the joints of the antennæ are more elongate, and the elytra of a much deeper red.

### **PYROPTERUS.**

*Mulsant, Ann. Soc. Agr. Lyon, 1838, i. p. 81.*

#### **Pyropterus sculpturatus.**

(Plate XV. fig. 8.)

*Waterh., Trans. Ent. Soc., 1878, p. 112.*

Nigro-piceus, opacus, subpubescens; antennis crassis; thorace parvo, antice angustiori, quinqueareolato; elytris rubris, quadricostatis, costis validis, interstitiis carinis validis transversis numerosis.

Long.  $3\frac{1}{2}$  lin.

*Hab.* Sarawak.

Resembles *Pyropterus affinis*, Payk., but is relatively shorter, the sculpture is much stronger, and the elytra are deeper red. Antennæ very stout, the second and third joints small and transverse. Thorax smaller than in *P. affinis*, the margins more thickened, the elevated lines on the thorax more pronounced, and the mesial lozenge-shaped areolet is much broader. Elytra relatively shorter than in *P. affinis*; the sculpture is similar, but the costæ are much more strong, especially the transverse ones, which are also very regular.

## CLADOPHORUS.

*Guérin, Voy. Coquille, Ent. p. 72.*

**Cladophorus ingenuus.**

(Plate XVI. fig. 2.)

Niger, parallelus, depressus; thorace, scutello elytrisque pallido flavis. ♂. Long.  $5\frac{1}{2}$  lin.

*Hab.* Dorey, New Guinea (*Wallace*).

Thorax with seven areolets, the discoidal one very narrow; the anterior border finely punctured. Elytra parallel, the four costæ distinct; the interstices with two rows of strong, very slightly transverse punctures, these rows divided by a fine line.

**Cladophorus fuscatus.**

(Plate XVI. fig. 6.)

Fusco-niger, parallelus, depressus, opacus; thorace flavo-piceo, medio fusco, septemareolato, marginibus crebre punctatis; elytris fuscis, quadricostatis, interstitiis biserialim fortiter punctato-striatis, humeris vage flavescentibus, suturâ juxta scutellum nigro-fuscâ, apice nigro-fusco-marginato. ♂. Long.  $7\frac{1}{4}$  lin.

*Hab.* Waigiou (*Wallace*).

A moderately broad, depressed species; nearly black; the thorax and elytra yellowish pitchy, palest on the shoulders, rather darker on the thorax and the greater part of the elytra; the disk of the thorax, the suture of the elytra at the base, and the margin of the apex nearly black. The thorax with the mesial areolet moderately broad, nearly extended to the anterior margin; the sides are moderately reflexed and somewhat thickly and roughly punctured. Elytra parallel, the intervals with two rows of strong, nearly square punctures. The abdomen is tinted with dark steel-blue.

**Cladophorus detractus.**

(Plate XVI. fig. 4.)

Fusco-niger, opacus; thorace septemareolato, nigro vel flavo, antice fusco, marginibus vix reflexis, scutello flavo; elytris quadricostatis, interstitiis crebre subtilius biserialim punctato-striatis, flavis, apice late nigris; pectore, pedibusque passim flavis.

Long.  $3\frac{1}{4}$ – $4\frac{1}{2}$  lin.

*Hab.* Aru Island (*Wallace*).

Much narrower than *C. ingenuus*, the thorax not much reflexed at the sides. The male example has the thorax yellow, with a fuscous spot anteriorly; the female has it black, with the posterior angles ferruginous; the discoidal areolet is broad in the middle, extending



from the base to the anterior margin; the ridges dividing the other areolets are, in the female, not well marked; the anterior border is obscurely punctured. Elytra gently convex, very delicately pubescent; the intervals with two rows of close fine punctures, the rows not divided by any distinct line; the basal half is yellow, or inclined to pale red. The sterna are yellow. The legs in the male have the base of the femora and the base of the tibiæ yellow; the female examples have the whole of the four anterior femora and tibiæ yellowish, the apex of the latter is dusky in one example.

The male has the antennæ flabellate; in the female they are simply dentate.

### **Cladophorus ornatus.**

(Plate XVI. fig. 1.)

Niger, opacus; thorace, scutello, elytrorum fasciâ latâ, pectore, abdomine basi, femorumque basi late flavis. ♂. Long.  $4\frac{1}{2}$  lin.

*Hab.* New Guinea (*Wallace*).

A species at once known from all its allies by the remarkable coloration of alternate clear yellow and dull black. Thorax with seven areolets, the mesial one only distinctly defined; the anterior border and the sides are punctured. Elytra dull black, with a broad yellow fascia rather before the middle; each elytron has four costæ, the intervals with two rows of punctures (which are only distinct in the yellow part), the rows divided by an extremely fine line.

### **Cladophorus aberrans.**

(Plate XVI. fig. 3.)

*Waterh., Trans. Ent. Soc., 1878, p. 112.*

Fuscus, pubescens; antennis brunneis, ramis fusco-nigris; thorace sordide testaceo, medio parum constricto; scutello apice fere truncato; elytris quadricostatis, interstitiis fortiter transversim punctatis, basi costis intermediis brevibus; humeris brunneo-testaceis; coxis palpidis. Long. 4 lin.

*Hab.* Aru Island (*Wallace*).

Antennæ brownish, with the apex of each joint and the branch (which is a little longer than the joint itself) blackish. Thorax pale testaceous, divided into seven distinct areolets. Elytra with the shoulders and the basal half of the suture and extreme lateral margin brownish; each elytron with the four costæ distinct, those near the base turn away from the scutellum; the interstices are strongly punctured with transverse punctures; in the first, second, and third interstices there are short intermediate costæ near the base.

**Cladophorus restrictus.**

(Plate XVI. fig. 5.)

*Waterh., Trans. Ent. Soc., 1878, p. 113.*

Fuscus, pubescens: antennis longe flabellatis; thorace septem-areolato, lineis elevatis limboque pallidis; elytris basi ipsâ anguste sordide flavâ, quadricostatis, interstitiis biseriatis obsolete subtiliter punctatis; femorum basi genibusque sordide flavescens. Long. 4 lin.

*Hab.* Waigiau (*Wallace*).

Thorax a little narrowed in front, the sides somewhat straight; the four anterior areolets nearly equal, the incrassate margins testaceous, the elevated lines pale pitchy. Scutellum deeply emarginate at the apex. Elytra a little narrowed in their middle, with the four costæ fine, the second and third slightly turn from the scutellum near the base; near the base and at the apex a very fine short costa may be seen between each pair of the complete costæ, but those at the apex are very obscure.

This species is somewhat aberrant in this genus on account of the costæ of the elytra not being parallel to the suture near the base. The branches of the middle joints of the antennæ are about six times as long as the joints themselves.

**ENICLASES.**

Antennæ long, somewhat dentate. Thorax narrow, with seven areolets, the two lateral ones imperfectly divided; the posterior angles acute, prominent. Scutellum somewhat rounded posteriorly, with a small notch at the apex. Elytra with seven costæ, the first trifurcate at the base; interstices with a single line of punctures. Legs very long, compressed.

I only know of one species, *Lycus* (gen. 35) *luteolus*, W., which has the scutellum formed as in this genus.

**Eniclases luteolus.**

(Plate XVI. fig. 12.)

*Lycus* (gen. 35) *luteolus*, *Waterh., Trans. Ent. Soc., 1878, p. 113.*

Flavus; antennis infuscatis, thorace marginibus evidenter punctatis, septemareolato, angulis posticis valde acutis; scutello subrotundato, postice medio acute exciso; elytris opacis septemcostatis, costâ primâ basi trifurcatâ, secundâ, quartâ et sextâ magis elevatis, interstitiis sat fortiter transversim punctatis. Long.  $5\frac{1}{2}$  lin.

*Hab.* Aru Island and Dorey (*Wallace*).

Thorax rather long, narrowed anteriorly, a little enlarged before the posterior angles; the anterior and lateral margins are rather

strongly punctured : the surface divided into seven areolet, but the lateral ridges scarcely join the mesial lanceolate areolet.

This species must not be confounded with *Trichalus acutangulus*, which it closely resembles ; but that species has the thorax less narrowed in front, and the scutellum is formed in the ordinary manner.

### TRICHALUS.

*Waterh., Trans. Ent. Soc., 1877, p. 82.*

The species of this genus resemble those of *Metriorrhynchus*, but have only a single discoidal lanceolate areolet to the thorax, and the elytra have the first costa divided into three at the base ; or, in other words, they have nine costæ, the first and third being abbreviated and united to the second not far from the base, so that there are only seven costæ posteriorly.

#### *Trichalus flavopictus.*

(Plate XVI. fig. 11.)

*Waterh., Trans. Ent. Soc., 1877, p. 82, pl. ii. figs. 92-96.*

Niger ; thorace ochraceo, utrinque biimpresso, disco areolâ lanceolatâ, in imo nigra, bene impresso ; scutello nigro ; elytris postice paulo ampliatis, ochraceis, apice nigris, septemcostatis, costis alternis minus elevatis, costâ juxta suturam basi trifidâ, interstitiis reticulato-punctatis ; coxis femorumque basi flavis. Long.  $3\frac{1}{2}$ - $6\frac{1}{2}$  lin.

*Hab.* Port Bowen.

♂. Antennæ long and broad, third to tenth joints gradually becoming shorter. Thorax reflexed at the sides : the disk raised, and with a deep longitudinal fovea, joined to the front margin by a carina. The penultimate segment of the abdomen is notched in the middle.

♀. Antennæ less strongly dentate. Thorax straighter at the sides. Elytra a little more parallel. Abdomen simple.

#### *Trichalus ampliatus.*

(Plate XVI. fig. 7.)

*Waterh., Trans. Ent. Soc., 1877, p. 83, pl. ii. figs. 97-101.*

Niger ; thoracis lateribus elytrisque rufis ; rostro brevissimo ; antennis sat longis ; thorace lateribus modice reflexis, medio nitido, disco impressione haud profundâ instructo ; elytris postice paulo ampliatis, septemcostatis, costis alternis minus elevatis, costâ juxta suturam basi trifidâ. ♂, ♀. Long.  $4\frac{1}{2}$ -6 lin.

*Hab.* E. Australia, Moreton Bay.

Antennæ rather long and stout, not much diminishing in width towards the apex. Thorax with the central part black and shining,

the sides red and somewhat reflexed. Elytra long and rather wide behind; the second, fourth, and sixth costæ are much stronger and more regular than the others; the interstices reticulate-punctate.

The two male examples have the disk of each elytron more or less black; the penultimate segment of the abdomen is notched in the middle.

The two females\* have the elytra a little less ample, and with less black on the disk. The abdomen simple. The antennæ are less strongly dentate.

### **Trichalus sulcatus.**

(Plate XVI. fig. 8.)

*Waterh., Trans. Ent. Soc., 1877, p. 83, pl. ii. figs. 102-105.*

Ochraceus; antennis, tibiis, tarsis, abdomine elytrorumque apice nigris; rostro fere nullo; thorace quadriimpresso, medio sulcato; elytris septemcostatis, costis alternis minus elevatis, costâ juxta suturam basi tritida, interstitiis reticulato-punctatis. ♂, ♀.

Long. 6 lin.

*Var.* Abdomine in parte antennisque basi flavis.

*Hab.* Brisbane, Port Essington.

Head somewhat less engaged in the thorax than in most species of this group; eyes not very large. Antennæ rather long and stout. Thorax moderately reflexed at the sides, with a longitudinal impression reaching nearly from the base to the apex. Scutellum yellow.

The antennæ are almost identical in the two sexes; the male has a small notch in the middle of the penultimate abdominal segment.

The female example from Port Essington has the second costa of the elytra remarkably thickened and elevated near the base. The base of the antennæ and nearly the whole abdomen are yellow.

### **Trichalus acutangulus.**

(Plate XVII. fig. 1.)

*Waterh., Trans. Ent. Soc., 1878, p. 114.*

Flavus; antennis flavo-fuscis; thorace antice angustato, marginibus reflexis supra granulato-punctatis, angulis posticis valde acutis; scutello subquadrato, apice triangulariter emarginato; elytris opacis septemcostatis, costâ primâ basi trifurcatâ.

Long.  $4\frac{2}{3}$  lin.

*Hab.* Dorey, New Guinea (*Wallace*).

Thorax shining in the middle, with a single mesial lanceolate areolet, the anterior and lateral margins thickly punctured. The second, fourth, and sixth costæ of the elytra are more distinct and

\* These specimens were not received with the males, but I have no doubt but they belong to the same species.

thicker than the others ; the punctures in the interstices are rather strong and close.

See note appended to *Enicluses luteolus*, p. 67.

### **Trichalus æmulus.**

(Plate XVI. fig. 9.)

*Waterh., Trans. Ent. Soc.*, 1878, p. 114.

Elongatus, ater; thorace antice supra granulato; elytris basi flavis, tricostatis, interstitiis biseriatim foveato-punctatis.

Long. 5 lin.

*Hab.* Aru Island (*Wallace*).

Thorax above shining, except in front. Scutellum rather large, broader than long, yellow, a little fuscous in the middle, truncate at the apex. Elytra very long, subparallel, the basal third ochraceous; each elytron with three distinct costæ, besides the three subscutellar costæ, which are distinct; the interstices with two lines of transverse punctures, the lines of punctures divided by a fine costa.

Thorax relatively broader than in the following species (*anceps*), and the punctures of the elytra are much more regular and defined, and the intermediate costæ, although fine, are distinct.

### **Trichalus anceps.**

(Plate XVII. fig. 2.)

*Waterh., Trans. Ent. Soc.*, 1878, p. 114.

Elongatus, ater, opacus; thorace antice angustato, supra antice granulato; elytris basi flavis, tricostatis.

Long. 3 lin.

*Hab.* Bacheian.

Antennæ very long and compressed. Thorax small, longer than broad, shining, except in front. Scutellum fuscous, concave, subquadrate, scarcely emarginate at the apex (nearly straight), the angles blunt. Elytra very long, dull black, with the basal fifth yellow; the three costæ on each elytron are well marked, and there is a short distinct costa near the scutellum; the usual transverse rugule of the interspaces are irregular and much broken, for the most part only appearing like granules; there are no intermediate costæ visible.

### **Trichalus griseus.**

(Plate XVII. fig. 3.)

Sordide flavo-testaceus, opacus; antennis elytrisque fuscis. ♂.

Long. 2½ lin.

*Hab.* Dorey, New Guinea (*Wallace*).

Antennæ fuscous, the basal joint rather paler. Thorax trapeziform, yellowish, with the mesial areolet not quite extending to the

anterior margin : anterior border rather thickly punctured. Elytra fuscous : the interstices with double rows of close, small, unequal-sized punctures. Legs testaceous, the anterior legs dusky.

One example has the base of the elytra tinged with yellow, and the legs are dusky except the base of the femora.

In the British-Museum collection are two specimens from Mysol, which differ from the foregoing in being nearly of a uniform grey or blackish grey. These may prove to be a distinct species.

### **Trichalus nigrescens.**

(Plate XVII. fig. 4.)

Griseo-niger, opacus : thorace marginibus angustissime testaceis. ♂. Long.  $3\frac{1}{2}$  lin.

*Hab.* Mysol (Wallace).

This species differs from the darker form of the preceding species in having the antennæ less linear, more decidedly dentate, the joints being a little broader. Thorax trapezoidal, with the extreme margins pale ; besides the usual mesial areolet, there are two small anterior ones not well defined, which are roughly punctured. The whole underside and the legs are nearly black.

### **Trichalus perturbatus.**

(Plate XVII. fig. 7.)

Pallide flavus, opacus ; antennis infuscatis ; elytris fuscis, basi anguste flavo ; abdomine apice infuscato. ♂, ♀. Long. 4 lin.

*Hab.* Dorey, New Guinea (Wallace).

This species scarcely differs from *T. griseus*, except in its much larger size : the antennæ are linear and long. The thorax is trapezoidal, with the anterior border punctured. Elytra dark fuscous, with the base more or less yellow ; the punctures in the rows of the interstices are small and very close, a little more regular than in *griseus*.

*Var.* A. Head, tibiæ, tarsi, and abdomen pale fuscous.

*Hab.* Mysol.

*Var.* B. Legs, except at the extreme base, and the abdomen, fuscous. Elytra more ample and longer than in the type.

*Hab.* Amboina.

### **Trichalus detractus.**

(Plate XVII. fig. 5.)

Pallide flavus : antennis elytrisque fuscis, his basi flavis ; pedibus infuscatis, femorum basi flavo ; abdomine fuseo. Long. 4 lin.

*Hab.* Waigiou (Wallace).

This differs from *perturbatus* in having the antennæ less linear—that is, they are rather broader and the joints are more dentate.

### **Trichalus niger.**

(Plate XVII. fig. 8.)

Totus niger, opacus; thorace transverso, lateribus ante basin parum angulatis; elytris striarum punctis subquadratis. ♀.

Long. 4 lin.

*Hab.* Java (*J. C. Bowring, Esq.*); Banda (*Wallace*).

Entirely dull black; the thorax slightly transverse, gently reflexed at the sides, which are somewhat angular before the base; the posterior angles are a little less than right angles; the anterior border is obscurely punctured; there is a rather well-marked round impression within each posterior angle. The first strong costa is joined by its two fine companions at not more than one-sixth the length of the elytra; the punctures in the lines are generally square, but they are very irregular.

There is a male example from Aru Island, which I think may prove to be distinct from *T. niger*; the thorax is more rounded in front, the posterior angles more diverging; the elytra have the fine lines dividing the rows of punctures almost wanting, and the strong costæ are more developed.

### **Trichalus communis.**

(Plate XVII. fig. 9.)

Fuscus; thorace trapezoidali, sordide flavo marginibus punctatis; scutello medio infuscato; elytris flavis, apice infuscato; coxis flavis. ♀.

Long.  $3\frac{1}{2}$ –4 lin.

*Hab.* Java (*J. C. Bowring, Esq.*).

Thorax with the sides reflexed, the anterior and lateral margins closely punctured, the mesial areolet not quite reaching the anterior margin. Elytra obscure yellow, dusky at the apex; the first strong costa is joined by its two fine companions scarcely beyond the first quarter of the length of the elytra, the punctures in the lines are generally square but somewhat unequal.

### **Trichalus serraticornis.**

(Plate XVI. fig. 10.)

*Pyrochroa serraticornis*, *Fabr., Syst. Ent.*, p. 203.

*Lycus serraticornis*, *Fabr., Mant.*, i. p. 164; *Oliv., Ent.*, ii. 29, p. 12, t. 1. f. 14.

*Trichalus serraticornis*, *Waterh., Trans. Ent. Soc.*, 1877, p. 84, pl. ii. figs. 109–112.

“Niger, thorace elytrisq. rufescentibus, elytris apice nigris.”

"Antennæ valde compressæ, serratæ, nigre. Thorax rufescens, marginibus subreflexis. Elytra sulcata, sulcis rugosis, rufescentia, apice nigra. Abdomen et pedes nigra. Femora basi testacea."

Long.  $3\frac{1}{2}$  lin.

*Hab.* "Nova Hollandia."

The colour of the thorax and elytra of the type is *now* nearly testaceous. The thorax is strongly punctured in front, and has a strong discoidal impression. The elytra have seven costæ, the alternate ones being rather indistinct and irregular; that next the suture is divided into three near the scutellum. The apex of the elytra and the abdomen are now wanting in the type specimen, which is the only one I have seen.

In the Banksian collection.

### *Trichalus cyaneiventris.*

(Plate XVII. fig. 6.)

Cyaneo-niger, subtus nitidus; antennis atris; thorace flavo, antice angustato, lateribus reflexis, angulis posticis acutis; scutello flavo; elytris flavis, opacis; prosterno mesosternoque flavis. ♂, ♀.

Long.  $7\frac{1}{2}$ –9 lin.

*Hab.* Philippine Islands (*Cuming*).

Thorax dull yellow, much narrowed anteriorly, the posterior angles diverging and acute, mesial areolet extending from the base to the anterior margin. Elytra subparallel in the male, considerably expanded at the apex in the female; the first strong costa is joined by its two finer companions nearly at the middle of the elytra; the punctures in the lines are well defined, rather close, and strongly transverse.

### ENYLUS.

Antennæ compressed, linear. Thorax with a mesial lanceolate areolet. Elytra parallel, each with eight costæ; the fourth and eighth distinct, and extending to the apex; the second and sixth only distinct at the base, indistinct posteriorly; the others very narrow and indistinct, the interstices each with a single line of punctures.

This genus is proposed for a single species which closely resembles some species of *Trichalus*, especially *T. griseus*, but has parallel costæ to the elytra.

### *Enylus segregatus.*

(Plate XVII. fig. 10.)

Testaceous; antennis fusciscentibus; capite, elytris abdomineque fuscis; elytris singulis costis quatuor, interstitiis crebre punctatis. ♂.

Long.  $2\frac{1}{2}$  lin.

*Hab.* Mysol (*Wallace*).



Antennæ dusky, linear. Thorax pale yellow, subquadrate (the anterior margin arcuate); the anterior and lateral margins closely and rather roughly punctured; the mesial areolet very shallow, extending nearly to the front margin. Scutellum fuscous. Elytra parallel, fuscous, rather paler towards the base; the second and fourth costæ complete, the first and third not extending beyond the middle of the elytra, the intervals with four lines of close, small punctures.

### STROPHICUS.

Antennæ linear. Thorax with a single lanceolate mesial areolet. Elytra parallel; each elytron with four distinct costæ, the third abbreviated posteriorly; the interstices with punctures, which are divided from each other by transverse carinæ; these punctures are, here and there, in double lines, but they are generally transverse and extend across the whole interstice.

It is somewhat doubtful whether this genus should be placed after *Xylobanus* or *Trichalus*; the linear antennæ and general form, however, make the latter position appear preferable.

### *Strophicus nigellus*.

(Plate XVII. fig. 11.)

Fuscus, subopaens; thorace trapezoidali, lateribus haud reflexis; singulo elytro quadricostato, costâ tertiâ postice obliterated, interstitiis sat fortiter punctatis. ♀. Long.  $2\frac{2}{3}$  lin.

*Hab.* Mysol (*Wallace*).

Thorax with the mesial areolet very distinct and elevated. Elytra parallel, the third costa much obliterated behind the middle; the first and second intervals have two lines of rather strong, clear (but unequal sized) punctures; beyond the middle these punctures frequently coalesce laterally, so that posteriorly there appears to be only a single row of transverse punctures; the third and fourth intervals have two lines of punctures.

### METANÆUS.

Eyes large. Antennæ long, with the third to tenth joints in the male each with a long compressed branch arising from the base. Thorax pubescent, with seven shallow impressions. Elytra pubescent, with four parallel costæ; the interstices each with a line of obscure punctures on each side.

Three species of this genus are at present known.

**Metanæus dispar.**

(Plate XVIII. fig. 1.)

*Lycus* (gen. 37) *dispar*, *Waterh., Trans. Ent. Soc.*, 1878, p. 115.

Elongatus, nigro-fuscus, griseo-pubescent; thorace impressionibus septem notato; scutello apice exciso; clytris sat convexis, sordide flavis, apice infuscato, costis quatuor obtusis instructis, interstitiis angustis parum convexis. Long.  $4\frac{1}{2}$  lin.

*Hab.* Malacca.

Antennæ blackish, with grey pubescence. Thorax grey-fuscous, with paler pubescence, the elevated parts paler; surface divided into seven areolets, the ridges dividing them blunt and not well defined; there is also a round fovea within each anterior lateral areolet. Scutellum greyish, with the apex very deeply excised. Each elytron with four rather broad blunt costæ, which are effaced at the base; the interstices very slightly convex, each with a line of obscure punctures on each side towards the apex.

**Metanæus conformis.**

(Plate XVIII. fig. 3.)

*Lycus* (gen. 37) *conformis*, *Waterh., Trans. Ent. Soc.*, 1878, p. 115.

Nigro-fuscus, griseo-pubescent; thorace limbo flavescenti, disco utrinque biimpresso; clytris sat convexis, sordide flavis, apice infuscato, costis quatuor obtusis instructis, interstitiis obsolete biserialiter punctatis. Long.  $3\frac{1}{4}$  lin.

*Hab.* Sarawak (*Wallace*).

Antennæ blackish, with grey pubescence. Thorax fuscous, with the margins dirty yellow; within each of the four angles there is an ill-defined impression, and in front there are three short longitudinal carinæ. Scutellum very deeply triangularly excised, yellowish. Elytra brownish yellow (except at the apex); each elytron has four rather broad blunt costæ, which are distinct to the base; the interstices with two rows of obscure subconfluent punctures.

This species is very close to the preceding, but the areolets on the thorax are not well defined, and the costæ of the elytra are distinct to the base.

**Metanæus fulvus.**

(Plate XVIII. fig. 2.)

Nigro-fuscus, angustus, convexiusculus, pubescens; thorace fulvo, obsolete septemareolato; clytris parallelis, fulvis, sericeo-pubescentibus, subtiliter striato-punctatis, interstitiis alternatis convexiusculis. ♂. Long.  $3\frac{1}{3}$  lin.

*Hab.* Penang (*J. C. Bowring, Esq.*).

Elongate narrow. Antennæ slender, the lamellæ springing from the base of the joints long and slender. Thorax fulvous (tinted with grey here and there), straight at the sides, the posterior angles slightly prominent and acute; above with seven ill-defined areolets, the ridges dividing them obtuse. Elytra long, gently convex, each with nine lines of extremely fine elongate punctures arranged in pairs on the back.

This species differs from *M. dispar* in having very slender antennæ: from *M. conformis* in being of a narrower form, in having the thorax narrower with more distinct areolets, the punctures of the lines on the elytra are finer and more elongate, and the alternate interstices are less convex.

### DILOPHOTES.

Thorax rugosely punctured in front, with a smooth mesial anterior carina. Elytra very slightly narrowed towards the apex (where they do not meet at the suture), or parallel, each with three costæ, the intervals flat and pubescent.

The type of this genus is *Lycus* (gen. 38) *exilis*, Waterh.; but I have associated with it a second species, which differs in having the elytra parallel. Both these species have the first costa of the elytra abbreviated posteriorly.

*Celetes pectinifer*, Kiesenw. (Berl. ent. Zeit., xviii. 1874, p. 251), from Japan, must, at least for the present, be placed in this genus. In this species the three costæ of the elytra are all complete; the male has the antennæ pectinate.

### *Dilophotes exilis*.

(Plate XVIII. fig. 8.)

*Lycus* (gen. 38) *exilis*, Waterh., *Trans. Ent. Soc.*, 1878, p. 116.

Flavescens, pubescens; thorace postice utrinque impresso, angulis posticis acutis; scutello apice truncato; elytris (apice ipso infuscato) pubescentibus, singulis costis tribus; antennis pedibusque infuscatis. Long. 3 lin.

*Hab.* Sarawak (*Wallace*).

Head with a longitudinal impressed line; antennæ blackish. Thorax narrowed anteriorly; the surface rugulose in front, with a smooth mesial line, transversely impressed behind, and with a shallow impression on each side. Elytra a little narrowed towards the apex, where they are not united at the suture: each elytron with three costæ; that next the scutellum is only half the length of the elytra; the third and fourth nearly reach the apex; the interstices are flat. Legs and abdomen infuscated, tarsi yellowish.

**Dilophotes pygmæus.**

(Plate XVIII. fig. 9.)

Niger, opacus; thorace antice lineâ elevatâ nitidâ, margine antico punctato, angulis posticis divergentibus acutis; clytris singulis crebro punctulatis, lineis tribus elevatis notatis, primâ abbreviatâ.

Long.  $2\frac{1}{2}$  lin.

*Hab.* Borneo (*Wallace*).

Thorax gently narrowed anteriorly, arcuate in front, the anterior border rather closely punctured; with a fine, smooth mesial line, which does not quite extend to the base. Elytra parallel, flat, very closely and finely punctured; each elytron with three fine costæ, the first very short, only visible at the base, the second and third nearly reaching the apex.

**ATELIUS.**

*Waterh., Trans. Ent. Soc., 1878, p. 104.*

Insect downy above. Head prominent, the forehead protuberant, eyes small; the antennæ longer than the whole insect, very compressed, the third to tenth joints triangular. Thorax small, the margins inerassate. Elytra parallel; each elytron with four costæ; the interstices with numerous transverse costæ, which divide the interstice into strongly transverse spaces.

**Atelius expansicornis.**

(Plate XVIII. fig. 5.)

*Lycus expansicornis, Walker, Ann. & Mag. N. Hist., 1858, ii. p. 282.*

Piceo-niger, supra fulvo-rufus, subtilissime pilosus; thorace trapezoidali, marginibus inerassatis; clytris parallelis, singulis quadricostatis, interstitiis costis transversis, antennis longissimis, fortiter serratis, fulvo-rufis, dimidio apicali nigro. ♂.

Long.  $3\frac{1}{2}$  lin.

*Hab.* Ceylon (*Templeton*).

The antennæ in the type specimen have the five apical joints black, but some examples have seven. The thorax has all the margins inerassate, the sides are reflexed. The costæ on the elytra are strong; the interstices have numerous transverse costæ, which divide the surface into strongly transverse spaces.

**SCARELUS.**

*Waterh., Trans. Ent. Soc., 1878, p. 104.*

Head as in *Atelius*. Antennæ much longer than the whole insect, linear, nearly filiform or slightly compressed. Thorax trapezoidal, small, with a complete mesial carina. Elytra parallel; each elytron with three costæ; the interstices with very numerous transverse impressions.

**Scarelus longicornis.**

(Plate XVIII. fig. 6.)

*Waterh., Trans. Ent. Soc., 1878, p. 116.*

Elongatus, ferrugineo-flavus, pubescens; antennis longissimis, filiformibus, nigris; thorace parvo, antice angustato, lineâ medianâ elevatâ; elytris parallelis, depressis, tricarinatis, interstitiis impressionibus numerosis transversis, apice anguste nigro; pedibus fuscis.

Long.  $2\frac{1}{4}$  lin.; antennæ  $3\frac{1}{2}$  lin.*Hab.* Java (*J. C. Bowring, Esq.*).

Head rather prominent, eyes small; antennæ longer than the whole insect, filiform, the first and second joints yellow, the rest black. Thorax with a distinct mesial elevated line, the sides gently reflexed, the posterior angles acute. Scutellum slightly narrowed towards the apex, which is very slightly notched. Elytra a little broader than the base of the thorax. Legs fuscous; tarsi rather short and stout.

**Scarelus orbatus.**

(Plate XVIII. fig. 7.)

*Waterh., Trans. Ent. Soc., 1878, p. 117.*

Fuscus; antennis longissimis, simplicibus; thorace fusco-flavo, utrinque excavato; elytris basi fusco-flavis, parallelis, tricostatis.

Long.  $2\frac{1}{4}$  lin.*Hab.* Singapore.

Antennæ longer than the whole insect, pubescent, not dentate, parallel, slightly compressed; the second joint not visible. Thorax small, trapezoidal, narrowed in front, dirty yellowish, with a complete mesial carina. The costæ on the elytra are distinct, the intervals with numerous transverse impressions.

**LIBNETIS.***Waterh., Trans. Ent. Soc., 1878, p. 104.*

Pubescent. Head small; antennæ rather short, simple, thicker about the middle, narrowed to the apex. Thorax small, trapeziform, the margins elevated, with no mesial carina. Elytra woolly, subparallel; each elytron with four costæ: the intervals obscurely and finely punctured.

**Libnetis pumilio.**

(Plate XVIII. fig. 10.)

*Waterh., Trans. Ent. Soc., 1878, p. 117.*

Niger, velutinus; thorace trapeziformi, supra excavato; elytris

dimidio basali flavo, quadricostatis, interstitiis planis, subtiliter obsolete punctulatis. Long.  $2\frac{1}{2}$  lin.

*Hab.* Ceylon (*Thwaites*).

Antennæ velvety, three quarters the length of the elytra, gradually tapering from the fourth joint to the apex. Head small. Thorax small, transverse, deeply excavated above. Elytra clear yellow for a little more than half their length, a little narrowed in the middle: each elytron with four narrow slightly-elevated costæ; the intervals flat, very finely and obscurely punctured.

### LYROPÆUS.

*Waterh., Trans. Ent. Soc., 1878, p. 105.*

Woolly and pubescent. Antennæ linear, compact, slightly compressed, the joints slightly emarginate at the apex. Thorax trapeziform, with a very slight indication of a mesial elevated line; the margins broadly reflexed. Elytra narrow at the base, much wider posteriorly; each elytron with three obscure raised lines (sometimes with an indication of a fourth): the surface woolly, extremely finely punctured.

#### *Lyropæus fallax.*

(Plate XVIII. fig. 4.)

*Lycus fallax, Walker, Ann. & Mag. N. Hist., 1858, ii. p. 281.*

Niger, dense brevissime pilosus: thorace fulvo-rufo, transverso; elytris fulvo-rufis, postice gradatim latioribus, singulis nervis tenuibus tribus, plagâ ante apicem nigrâ. Long. 4-5 lin.

*Hab.* Ceylon (*Thwaites & Purdie*).

Head very small, black above, red beneath. Antennæ very compact, linear, compressed. Thorax trapezoidal, the sides gently reflexed. Scutellum black. Elytra at the base scarcely wider than the thorax, about twice as broad a little before the apex: each elytron has three fine raised lines, sometimes with an indication of a fourth: the apex is completely rounded; before the apex there is a broad black patch or band.

*Var.* Rather larger than the typical form: the antennæ with slightly fulvous pile; the thorax rather more strongly transverse; the scutellum fulvous red: the elytra with black extending to the apex.

### DEXORIS.

*Waterh., Trans. Ent. Soc., 1878, p. 105.*

Head nearly as in the preceding genus. Antennæ woolly, thickest at the base, gradually tapering to the apex. Thorax trapezoidal, with a carina on each side, extending from the anterior angle to the middle of the posterior margin, where the two carinæ

consequently meet. Elytra flat, pubescent, parallel, with no costæ; the surface thickly studded with very minute obtuse tubercles.

**Dexoris insignis.**

(Plate XVIII. fig. 11.)

*Waterh., Trans. Ent. Soc., 1878, p. 117.*

Ochraceus, subvelutinus; antennis basin versus obscurioribus; thorace trapezoidali, antice rotundato, subnitido, supra in partes tres divisio; scutello basi angustato, apice fere bilobo; elytris parallelis, depressis, tuberculis minutis obtusis crebre adpersis.

Long. 3 lin.

*Hab.* Sierra Leone.

Dull ochraceous, appearing velvety. Head longitudinally impressed above; eyes black; antennæ thickest at the third joint, gradually tapering to the apex, brown at the base, becoming yellow towards the tip. Thorax transverse, somewhat rounded in front, rather straight at the sides; above with a well-marked oblique carina on each side, reaching from the middle of the hind margin to the anterior margin just above the eye. Scutellum narrowed at the base, deeply notched at the apex. Elytra flat, velvety, closely beset with minute blunt tubercles.





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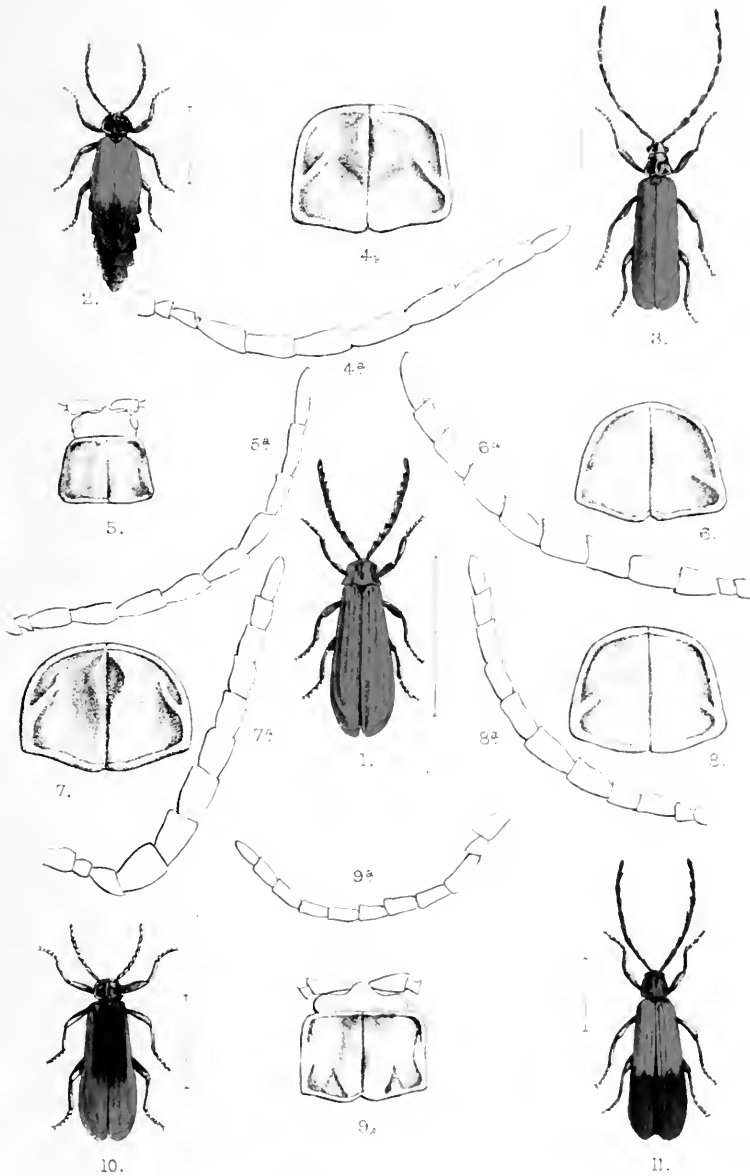
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*triangularis* (Lycus), 10.  
*Trichalus*, 67.  
*tristis* (Eurrhacus), 24.  
*turbidus* (Bulenides), 35.  
*typica* (Digrapha), 21.  
*typicum* (Calopteron), 21.  
  
*uniforme* (Porrostoma),  
     45.  
  
*ustus* (Lycus), 16.  
  
*vagans* (Metr.), 54.  
*velutinus* (Calochromus),  
     5.  
*velutinus* (Metr.), 60.  
*vestitus* (Calochromus),  
     6.  
*vulpinus* (Lycostomus),  
     11.  
  
*xanthomelas* (Lycus), 17.  
*Xylobanus*, 38.



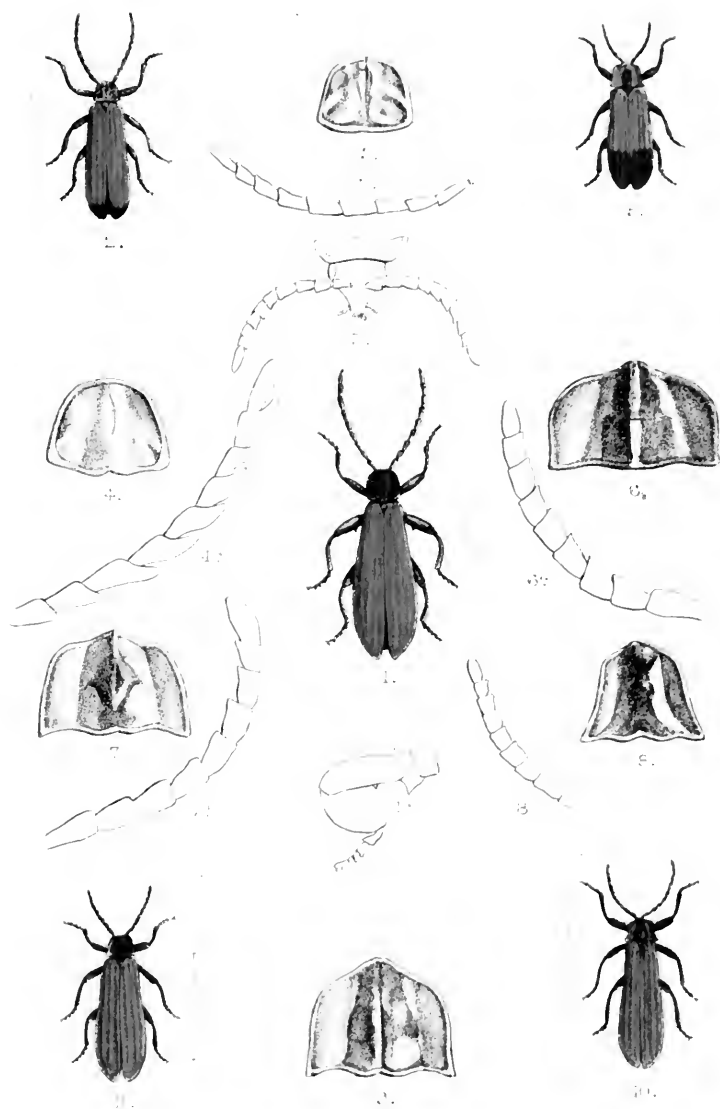


Edwin Wilson, del. et lith.

Mintern, 1875, Pl. 1.

- |                                   |                                    |
|-----------------------------------|------------------------------------|
| 1. <i>Macrolyrus bowringii</i> .  | 6. <i>Calochremus nubes</i> .      |
| 2. <i>Calochremus basalis</i> .   | 7. <i>Calochremus reuteri</i> .    |
| 3. <i>Calochremus orbatus</i> .   | 8. <i>Calochremus segregatus</i> . |
| 4. <i>Calochremus rugatus</i> .   | 9. <i>Calochremus tarsalis</i> .   |
| 5. <i>Calochremus melanurus</i> . | 10. <i>Calochremus apicalis</i> .  |
| 11. <i>Calochremus arnaus</i> .   |                                    |





Scale 1/100000th.

Mounting: Arthropod

- |  |                                      |
|--|--------------------------------------|
| 1. <i>Carabus</i> <i>aspur</i> .       | 11. <i>Lyctus</i> <i>trichotus</i> . |
| 2. <i>Colletes</i> <i>restitus</i> .   | 12. <i>Lyctus</i> <i>restitus</i> .  |
| 3. <i>Colletes</i> <i>lepidus</i> .    | 13. <i>Lyctus</i> <i>restitus</i> .  |
| 4. <i>Carabus</i> <i>longipennis</i> . | 14. <i>Lyctus</i> <i>restitus</i> .  |
| 5. <i>Demotus</i> <i>peltatus</i> .    | 15. <i>Lyctus</i> <i>restitus</i> .  |
|  | 16. <i>Lyctus</i> <i>restitus</i> .  |
|  | 17. <i>Lyctus</i> <i>restitus</i> .  |
|  | 18. <i>Lyctus</i> <i>restitus</i> .  |
|  | 19. <i>Lyctus</i> <i>restitus</i> .  |
|  | 20. <i>Lyctus</i> <i>restitus</i> .  |

II *Lyctus* *restitus*







2.



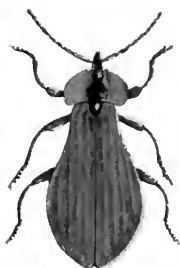
3.



5.



5a



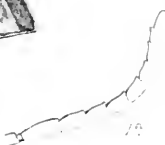
1.



6.



7.



7a



8.



9.



10.



11.

Edwin Wilson del et lith.

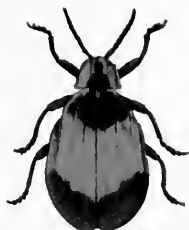
Mus. Brit. Mus. Nat. Hist.

1. *Lycostomus* *variegatus* (L.)
2. *Lycostomus* *fulvipes* (L.)
3. *Lycostomus* *andreae* (L.)
4. *Lycostomus* *internebulosus* (L.)
5. *Lycostomus* *analis* (L.)
6. *Lycostomus* *fulvipes* (L.)
7. *Lycostomus* *andreae* (L.)
8. *Lycostomus* *internebulosus* (L.)
9. *Lycostomus* *analis* (L.)
10. *Lycostomus* *fulvipes* (L.)
11. *Lycostomus* *andreae* (L.)

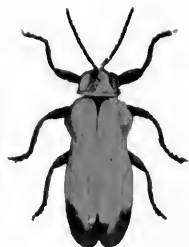




1.



2.



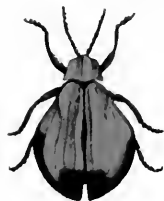
3.



4.



5.



6.



7.



8.



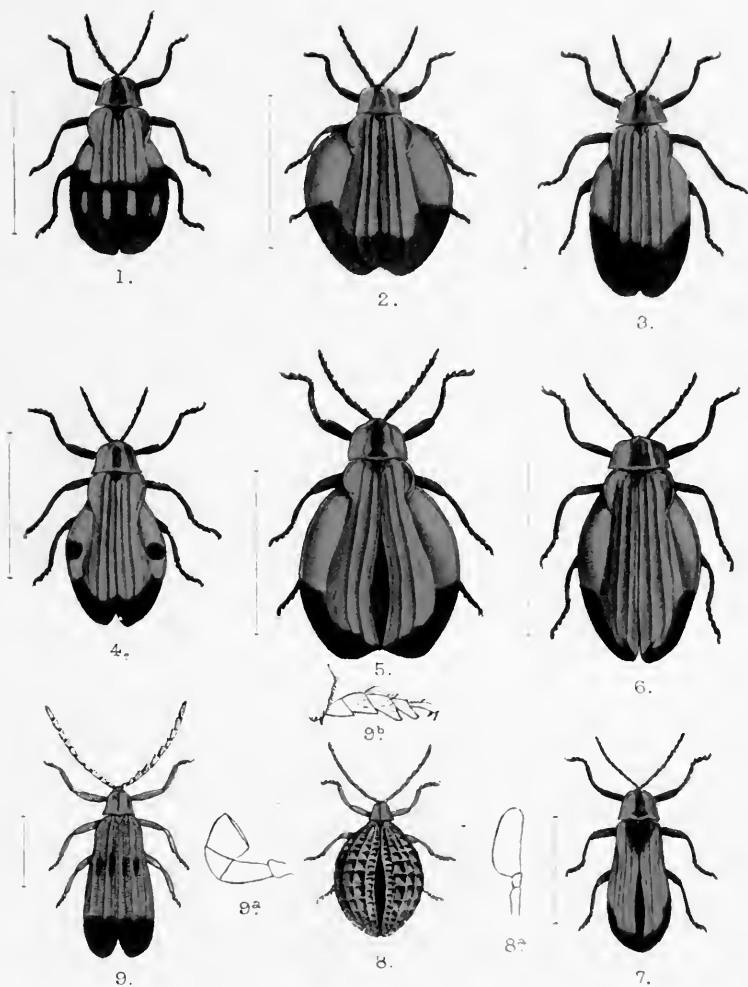
9.

Edwin Wilson del et lith.

Muntern Bros imp.

- |                                 |                                |
|---------------------------------|--------------------------------|
| 1. <i>Lycus xanthomelas</i> . ♀ | 5. <i>Lycus palliatus</i> .    |
| 2. <i>Lycus pyramiformis</i> .  | 6. <i>Lycus semiamplexus</i> ♂ |
| 3. <i>Lycus scapularis</i> .    | 7. <i>Lycus subcostatus</i>    |
| 4. <i>Lycus xanthomelas</i> .   | 8. <i>Lycus aspidatus</i> .    |
| 9. <i>Lycus semiamplexus</i> ♀  |                                |

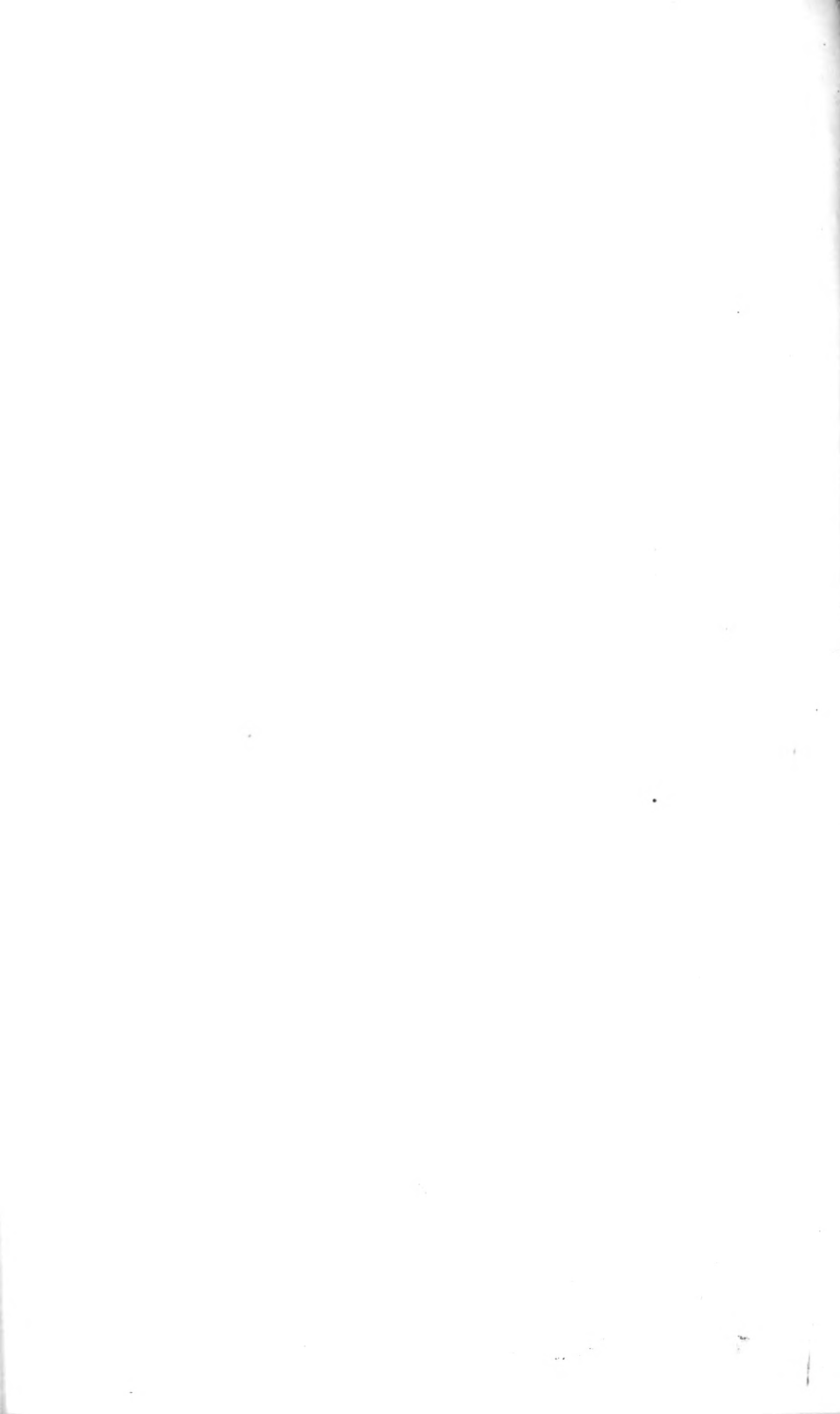




Edwin Wilson del et lith.

Mintern Bros imp.

- |                                    |                                 |
|------------------------------------|---------------------------------|
| 1. <i>Lycus fenestratus</i> .      | 5. <i>Lycus elegans</i> ♂       |
| 2. <i>Lycus æolus</i> ♂.           | 6. <i>Lycus elegans</i> ♀       |
| 3. <i>Lycus æolus</i> ♀.           | 7. <i>Lycus natus</i>           |
| 4. <i>Lycus subdenticulatus</i> ♀. | 8. <i>Brachinus pfeifferi</i> . |
| 9. <i>Calopterus notatus</i>       |                                 |





1.



3.



2.



4.



5.



6.



7.



9.

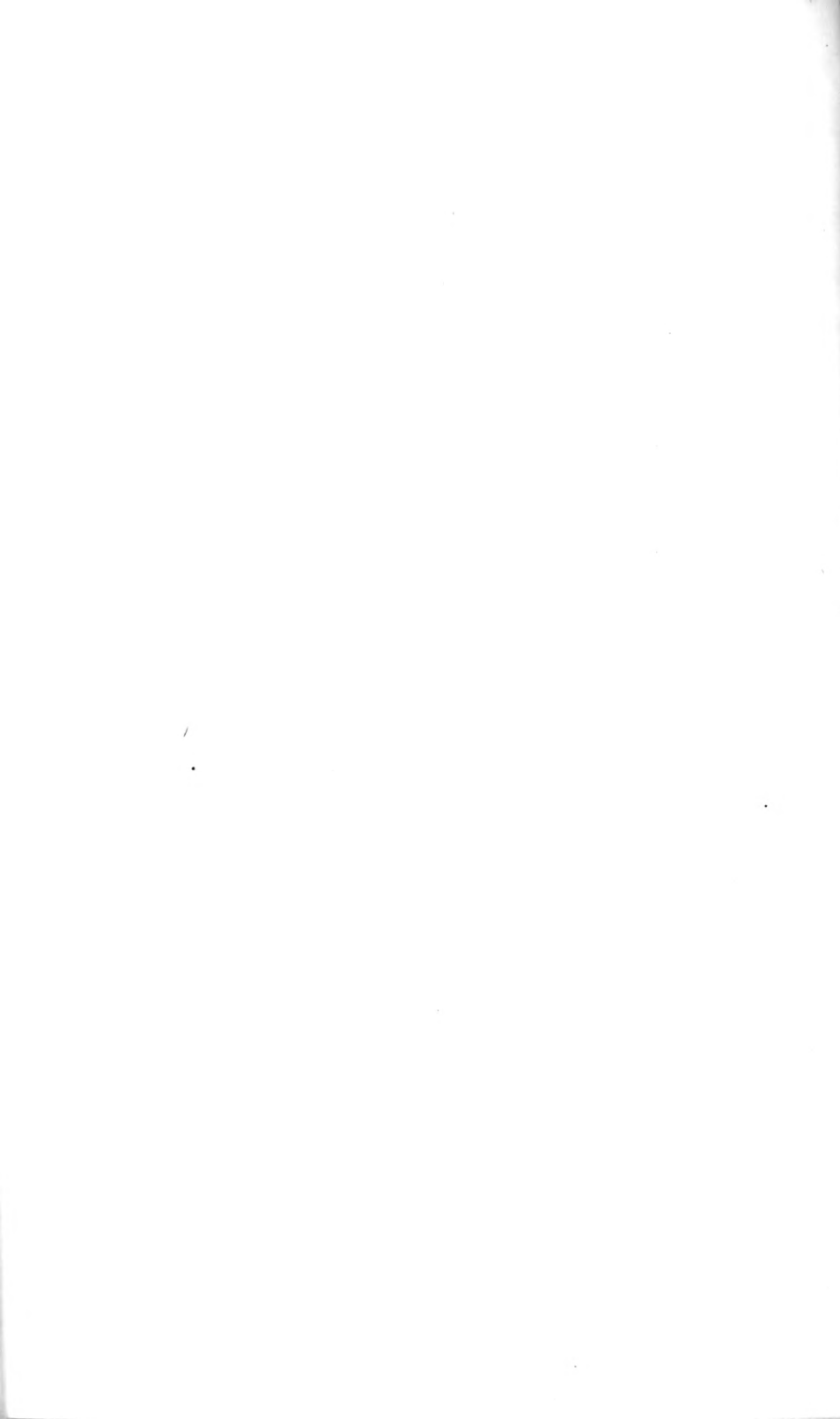


8.

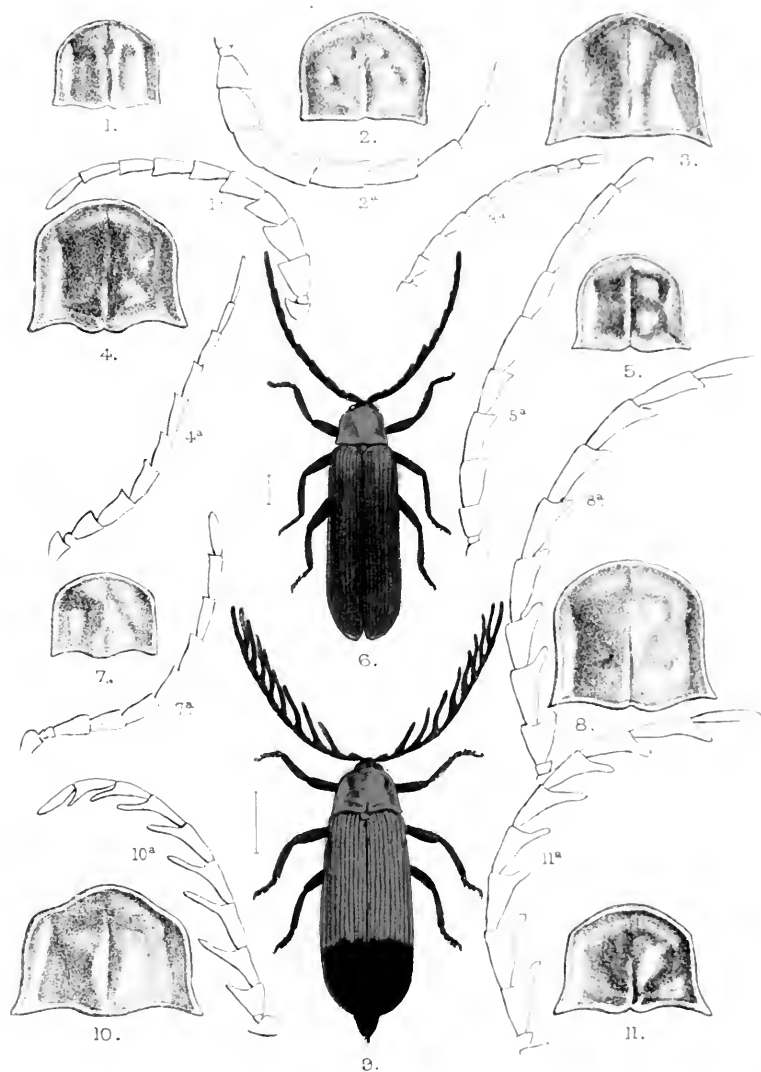
Edwin Wilson del et lith.

Mintern Bros imp.

- |                        |                         |
|------------------------|-------------------------|
| 1. Calopteron typicum. | 5. Euxracnus tristis.   |
| 2. Calopteron divisum. | 6. Cœnia scapularis.    |
| 3. Calopteron dorsale. | 7. Plateros chinensis.  |
| 4. Celetes basalis.    | 8. Plateros dispellens. |
| 9. Lyponia debilis.    |                         |





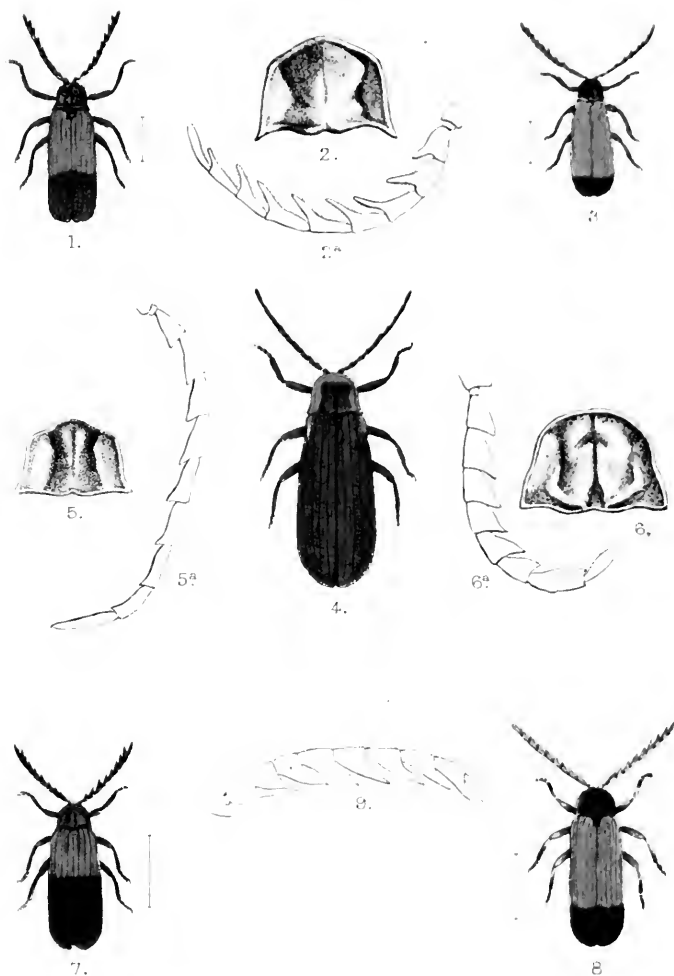


Edwin Wilson del et lith.

Museum Brit. Mus.

- |                                   |                                     |
|-----------------------------------|-------------------------------------|
| 1. <i>Plateros parvulus</i> ♂     | 6. <i>Dichammatus crinitipennis</i> |
| 2. <i>Plateros languidus</i> ♂    | 7. <i>Dichammatus pallens</i>       |
| 3. <i>Plateros fuscipennis</i> ♂  | 8. <i>Ditanece rufescens</i>        |
| 4. <i>Plateros exilis</i> ♂       | 9. <i>Ditanece pubicornis</i>       |
| 5. <i>Plateros carolinensis</i> ♂ | 10. <i>Ditanece punctipennis</i>    |
|                                   | 11. <i>Ditanece proginus</i>        |



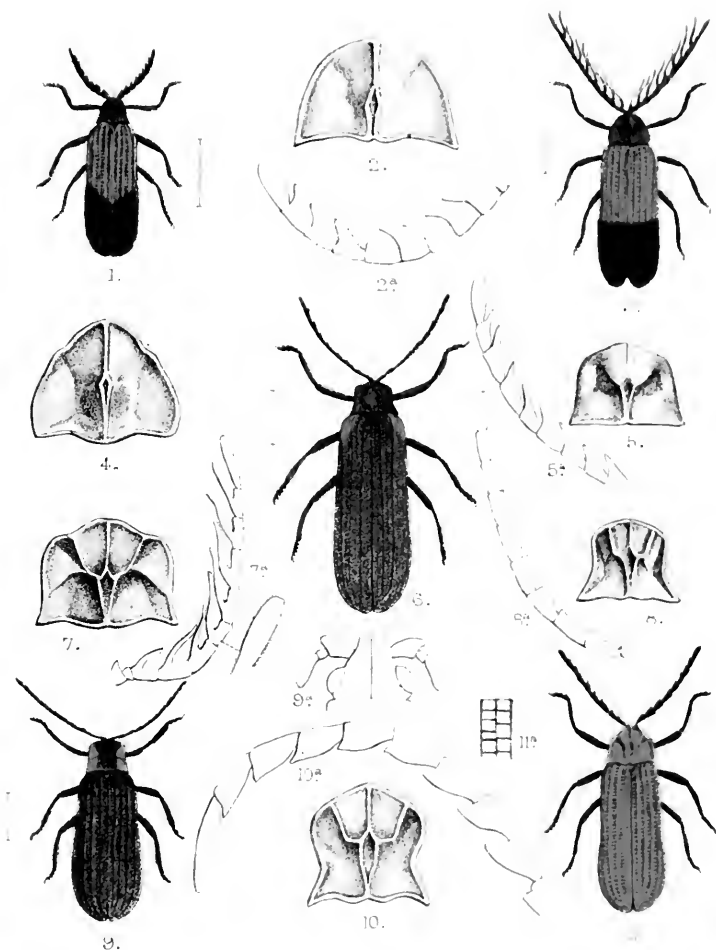


Edwin Wilson. del et lith.

Mintern. Drua imp.

- |                                 |                                 |
|---------------------------------|---------------------------------|
| 1. <i>Ditanees pubipennis</i> . | 5. <i>Plateros lictor</i> .     |
| 2. <i>Ditanees sobrinus</i> .   | 6. <i>Malampyra mscilla</i> .   |
| 3. <i>Ditanees terminalis</i> . | 7. <i>Malampyra alternans</i> . |
| 4. <i>Plateros alatus</i> .     | 8. <i>Ditua deplanata</i> .     |
| 9. <i>Cautires excellens</i> ♀  |                                 |



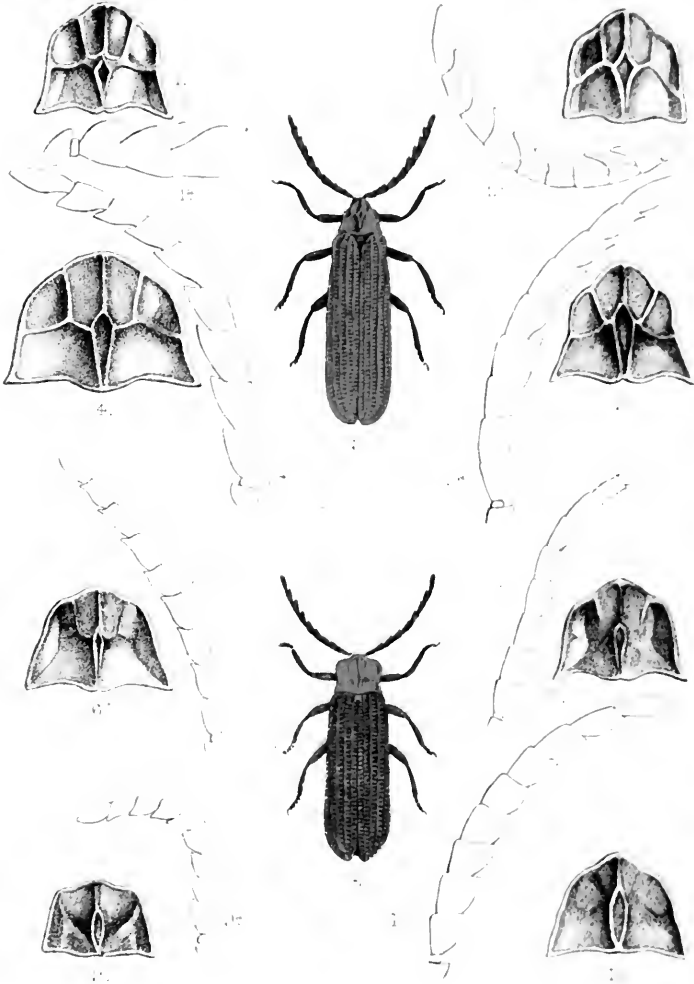


Edwin Wilson del et lith.

Museum Brit. n. 4.

- |                                   |                                 |
|-----------------------------------|---------------------------------|
| 1. <i>Bulenides obsoletus</i> . ♀ | 3. <i>Eros praefectus</i> .     |
| 2. <i>Bulenides pauper</i> . ♂    | 7. <i>Cautires congener</i> .   |
| 3. <i>Cautires excellens</i> . ♂  | 8. <i>Xylobanus loricatus</i> . |
| 4. <i>Bulenides turbidus</i> .    | 9. <i>Fraxites obtus</i> .      |
| 5. <i>Bulenides dubius</i> .      | 10. <i>Xylobanus costifer</i> . |
|                                   | 11. <i>Xylobanus strabus</i> .  |





Edwin Wilson del. et lith.

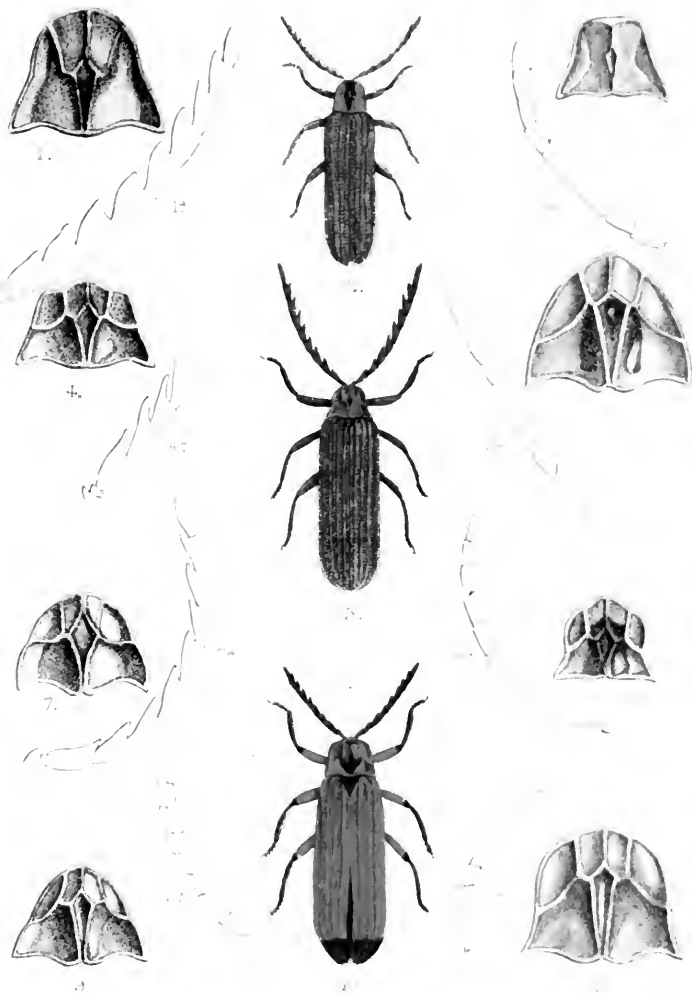
- 1. *Xylotrupes ruficornis*
- 2. *Xylotrupes ruficornis*
- 3. *Xylotrupes ruficornis*
- 4. *Xylotrupes ruficornis*
- 5. *Xylotrupes ruficornis*

Mus. Brit. Mus.

- 6. *Xylotrupes ruficornis*
- 7. *Xylotrupes ruficornis*
- 8. *Xylotrupes ruficornis*
- 9. *Xylotrupes ruficornis*
- 10. *Xylotrupes ruficornis*





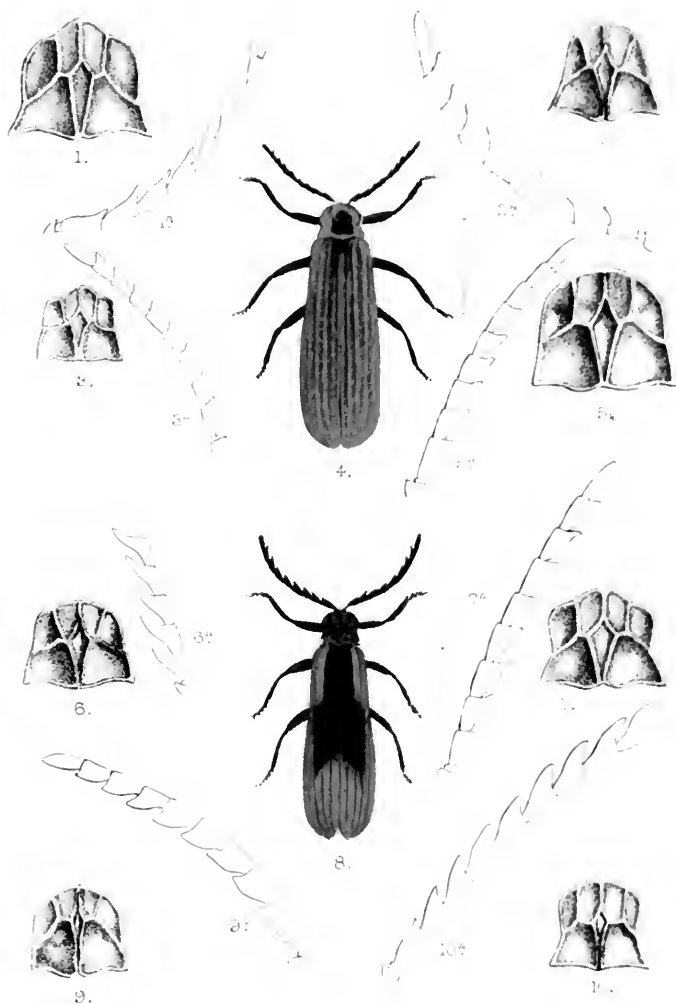


Edwin Wilson, del. et lit.

W. H. H. H. H.

- |                                 |                               |
|---------------------------------|-------------------------------|
| 1. <i>Xylotrupes fuliginosa</i> | 4. <i>Phaenocarpa rufipes</i> |
| 2. <i>Xylobanus confusus</i>    | 5. <i>Phaenocarpa rufipes</i> |
| 3. <i>Xylobanus fuliginosa</i>  | 6. <i>Phaenocarpa rufipes</i> |
| 4. <i>Phaenocarpa rufipes</i>   | 7. <i>Phaenocarpa rufipes</i> |
| 5. <i>Xylobanus rufipes</i>     | 8. <i>Phaenocarpa rufipes</i> |
|                                 | 9. <i>Phaenocarpa rufipes</i> |



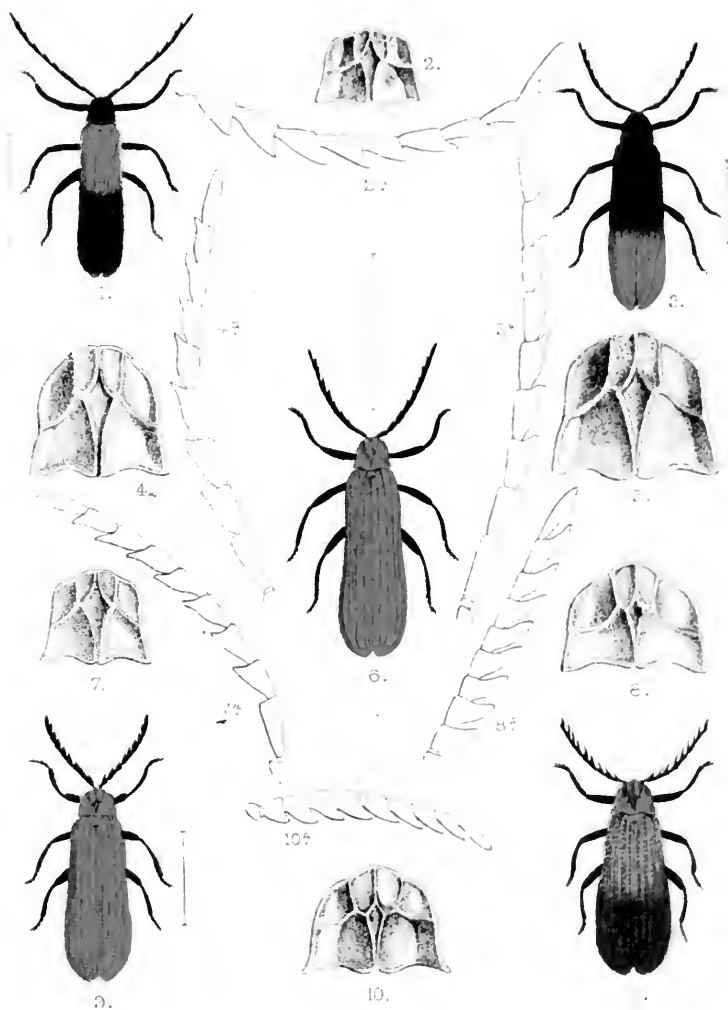


Edwin Wilson del et lith.

Mintern. Imp. w.

- |  |   |
|--|---|
| 1. <i>Pterostoma apicale.</i>            | 6. <i>Metriorrhynchus salebrosus.</i>     |
| 2. <i>Metriorrhynchus togatus.</i>       | 7. <i>Metriorrhynchus lugubris.</i>       |
| 3. <i>Metriorrhynchus scalaris.</i>      | 8. <i>Metriorrhynchus plagiatus.</i>      |
| 4. <i>Metriorrhynchus fuscolineatus.</i> | 9. <i>Metriorrhynchus flavicollis.</i>    |
| 5. <i>Metriorrhynchus fallax.</i>        | 10. <i>Metriorrhynchus karschii, var.</i> |



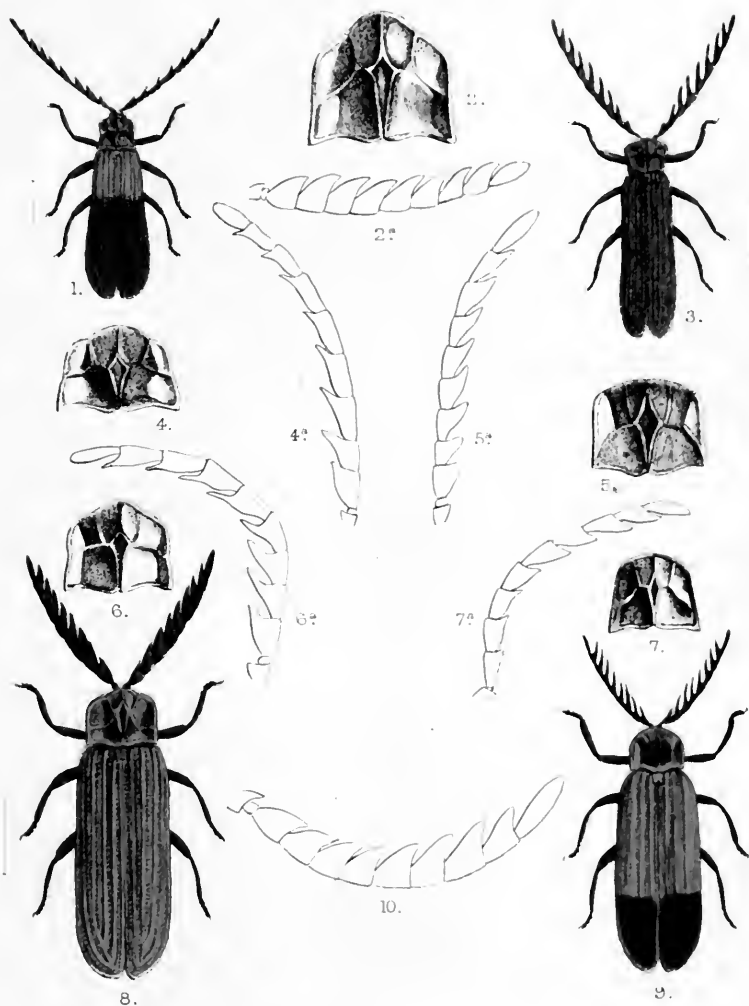


Edwin Wilson del. et lith.

M. Stern, Frankfurt.

- |  |  |
|--|--|
| 1. <i>Metriorrhynchus immersus</i> .       | 6. <i>Metriorrhynchus tritripennis</i> |
| 2. <i>Metriorrhynchus risticus</i> .       | 7. <i>Metriorrhynchus sericeus</i> .   |
| 3. <i>Metriorrhynchus nobilis</i> .        | 8. <i>Metriorrhynchus astutus</i>      |
| 4. <i>Metriorrhynchus philippinensis</i> . | 9. <i>Metriorrhynchus lineatus</i>     |
| 5. <i>Metriorrhynchus sericeus</i> .       | 10. <i>Metriorrhynchus vagans</i>      |
|  | 11. <i>Metriorrhynchus simulans</i> .  |





Edwin Wilson. del et lith.

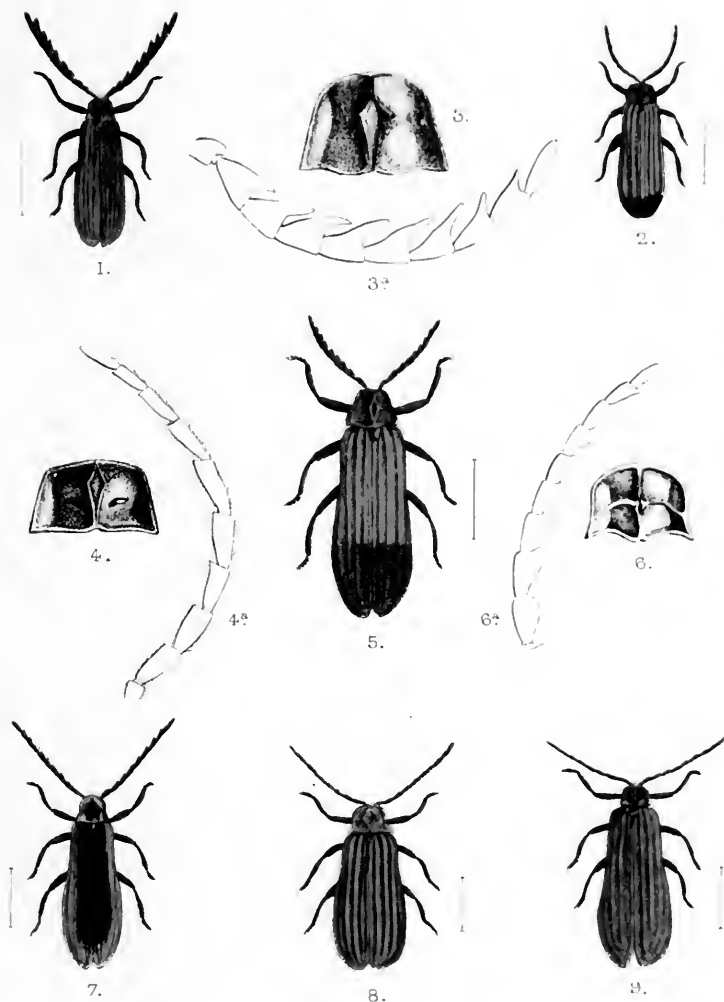
Münster, H. &amp; S. imp.

1. *Metriorrhynchus atrofuscus*.
2. *Metriorrhynchus rubicundus*.
3. *Metriorrhynchus puncticollis*.
4. *Metriorrhynchus flavolateralis*.
5. *Metriorrhynchus angustulus*.

6. *Metriorrhynchus dilutus*.
7. *Metriorrhynchus ater* ♂.
8. *Metriorrhynchus orientalis*.
9. *Metriorrhynchus cinctus* ♂.
10. *Metriorrhynchus cinctus* ♀.



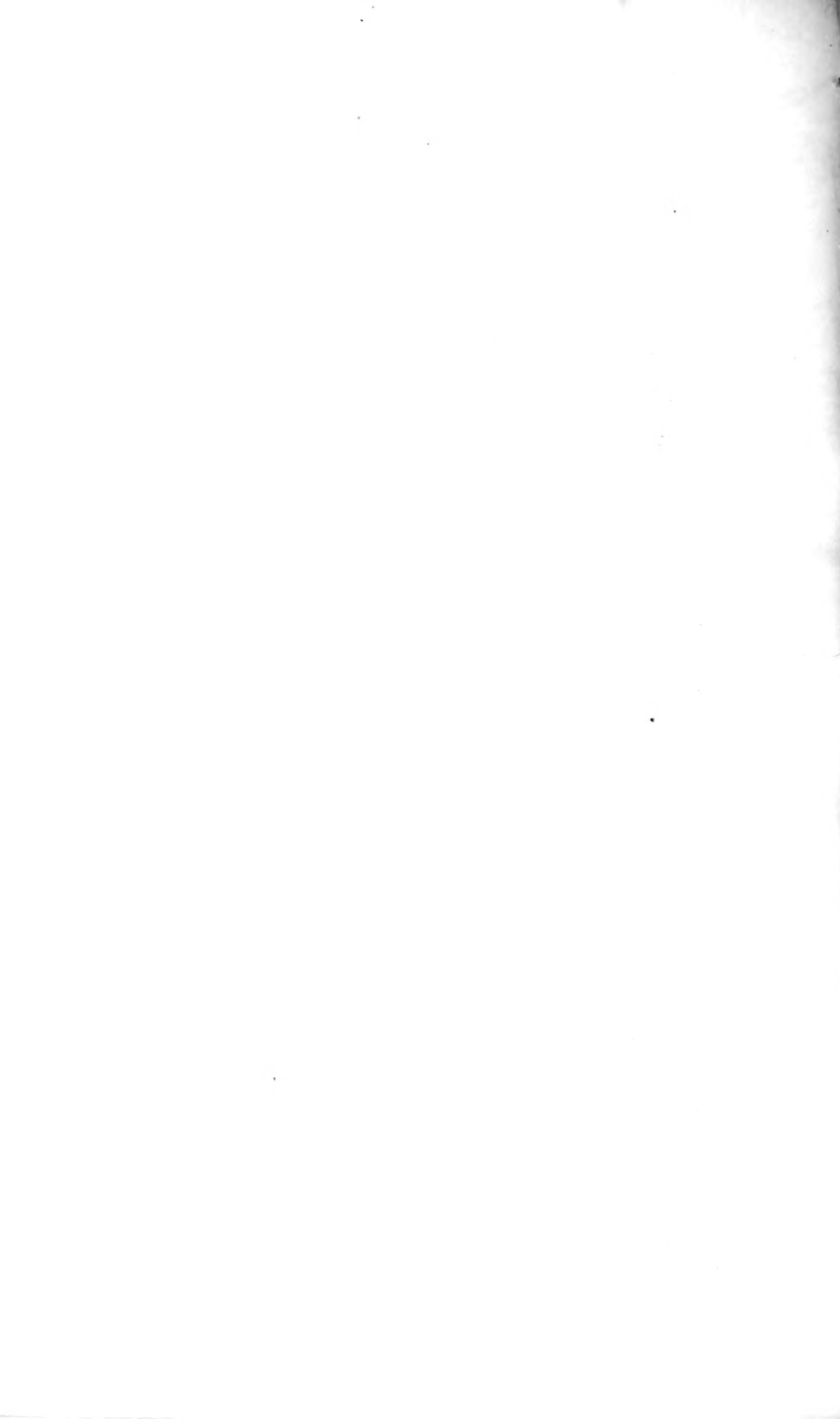


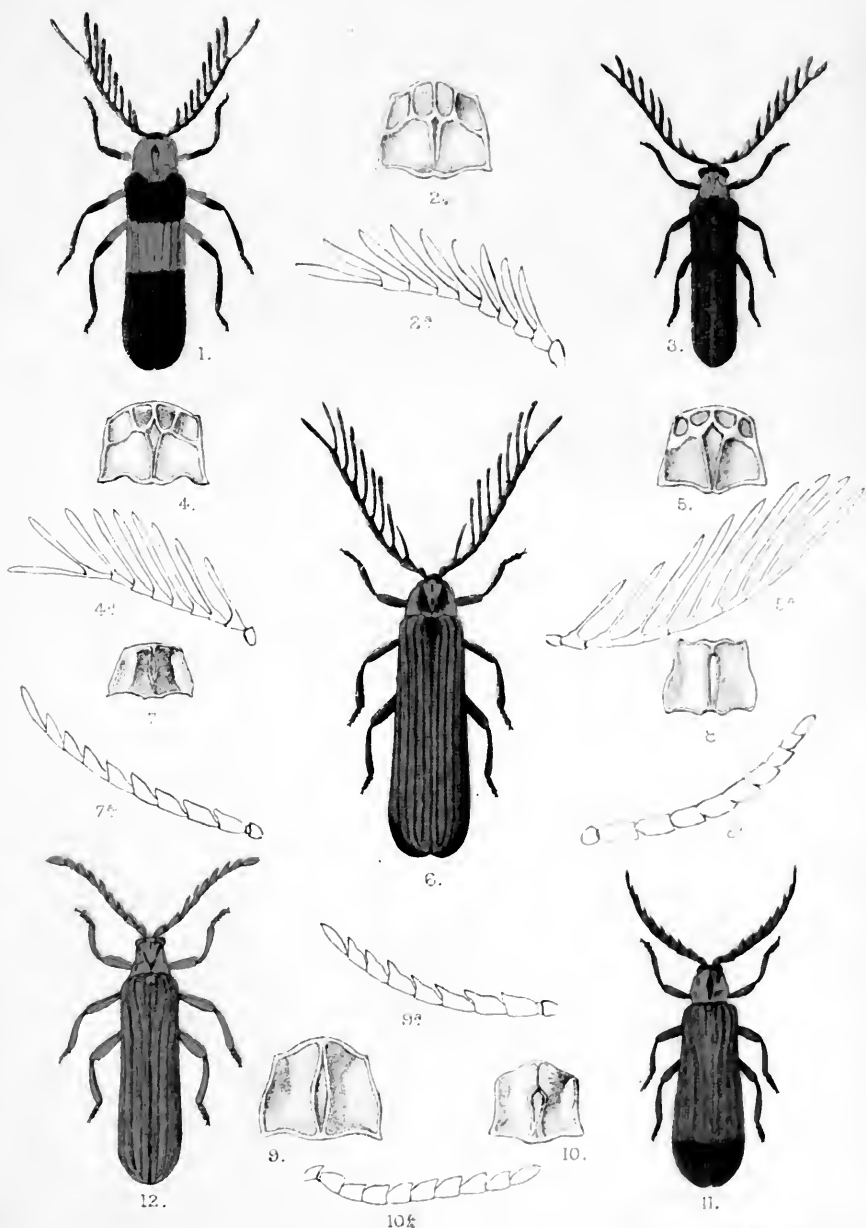


Edwin Wilson, del et lith.

Mintern Bros imp.

- |                                   |                                     |
|-----------------------------------|-------------------------------------|
| 1. <i>Conderis signicollis</i> .  | 5. <i>Stadenus dichrous</i> .       |
| 2. <i>Synchonnus clientulus</i> . | 6. <i>Conderis major</i> .          |
| 3. <i>Stadenus inquinulus</i> .   | 7. <i>Achras limbatus</i> .         |
| 4. <i>Taphes frontalis</i> . ♂.   | 8. <i>Pyropterus sculpturatus</i> . |
| 9. <i>Taphes brevicollis</i> ♀.   |                                     |



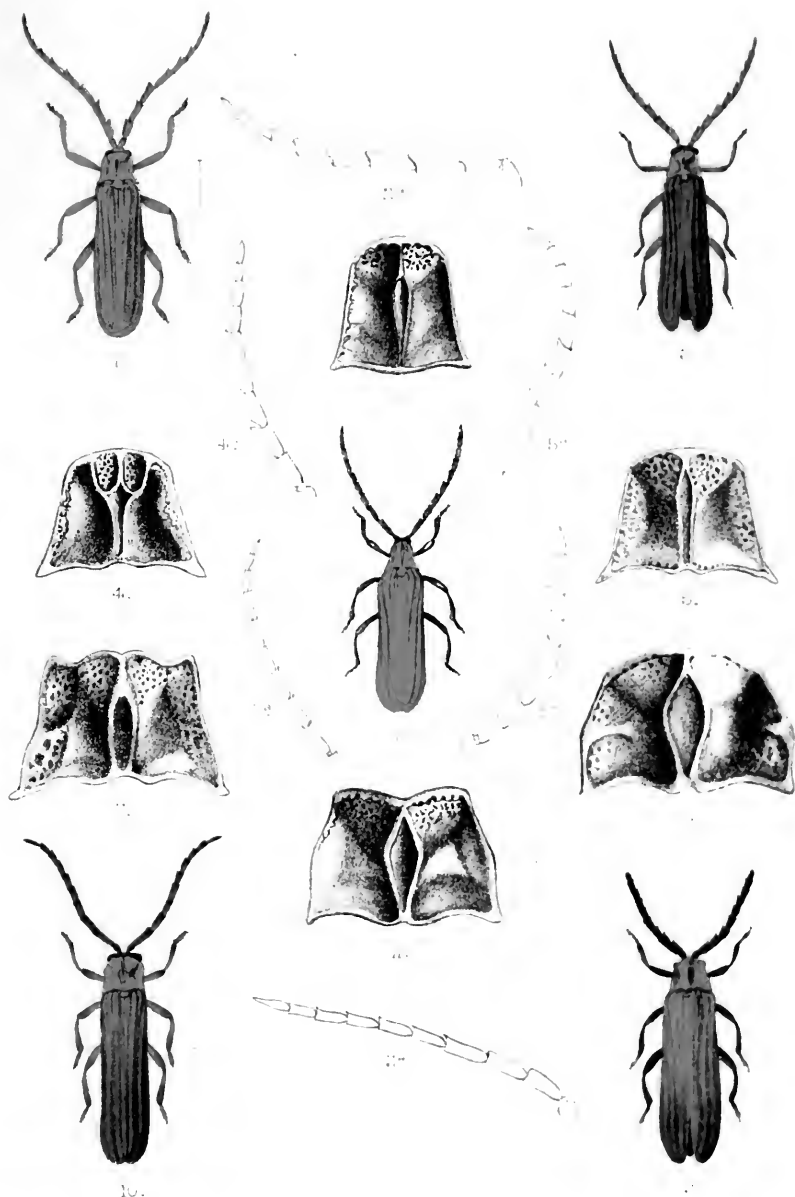


Edw. A. Smith, del et lith.

Mintern Bros imp.

- |                                    |                                      |
|------------------------------------|--------------------------------------|
| 1. <i>Cladophorus ornatus</i> .    | 7. <i>Trichalus ampliatus</i> .      |
| 2. <i>Cladophorus nigerrimus</i> . | 8. <i>Trichalus sulcatus</i> .       |
| 3. <i>Cladophorus aberrans</i> .   | 9. <i>Trichalus zemulus</i> .        |
| 4. <i>Cladophorus detractus</i> .  | 10. <i>Trichalus serraticornis</i> . |
| 5. <i>Cladophorus restrictus</i> . | 11. <i>Trichalus flavopictus</i> .   |
| 6. <i>Cladophorus fuscatus</i> .   | 12. <i>Emclases luteolus</i> .       |



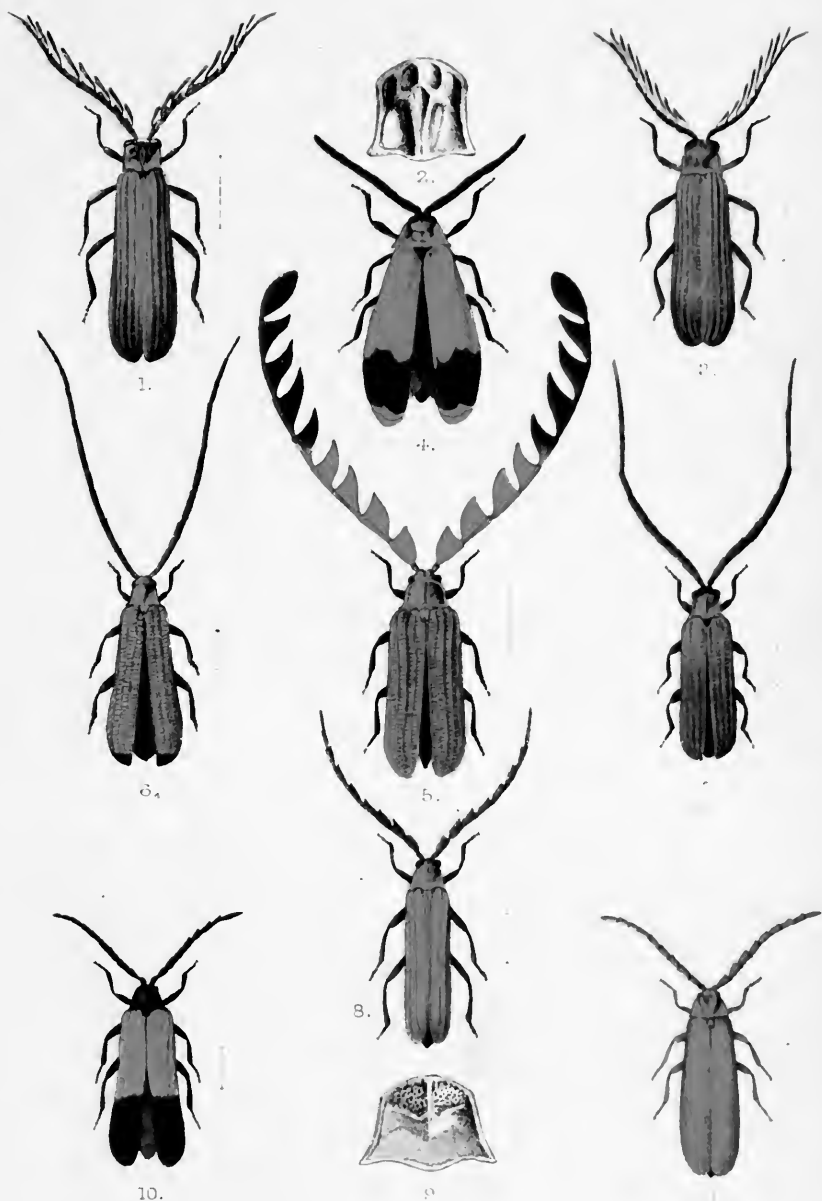


Edw. A. Smith, del et lith.

- |                                  |                                |
|----------------------------------|--------------------------------|
| 1. <i>Trichalus acutirostris</i> | 6. <i>Trichalus pumilio</i>    |
| 2. <i>Trichalus anceps</i>       | 7. <i>Trichalus perturbans</i> |
| 3. <i>Trichalus griseus</i>      | 8. <i>Trichalus niger</i>      |
| 4. <i>Trichalus nigrescens</i>   | 9. <i>Trichalus varians</i>    |
| 5. <i>Trichalus detraetus</i>    | 10. <i>Exylius segregatus</i>  |

11. *Strophicus impellus*





Edw A Smith del et lith.

Mintern. Piron imp.

- |                                |                               |
|--------------------------------|-------------------------------|
| 1. <i>Metaneurus dispar</i>    | 6. <i>Seareus confusus</i>    |
| 2. <i>Metaneurus fulvus</i>    | 7. <i>Seareus orbatus</i>     |
| 3. <i>Metaneurus conformis</i> | 8. <i>Dilephotes exilis</i>   |
| 4. <i>Lyropneus fallax</i>     | 9. <i>Dilephotes pygmaeus</i> |
| 5. <i>Atelus expansicornis</i> | 10. <i>Libreus pumilus</i>    |
| 11. <i>Dexous insignis</i>     |                               |









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H250 Illustrations of Animal  
pt. 1 specimens.

bio. ed.

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